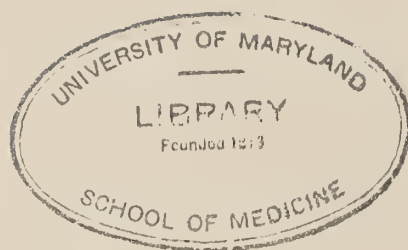


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THE Journal

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CONTENTS

Problems That Arise in the Use of the Intra-
medullary Fixation Principle in Frac-
tures

James K. Stack, M.D., Chicago, Illinois 1

The Autonomic Nervous System: Clinical
Application

Louis T. Palumbo, M.D., Des Moines 6

Diagnosis and Management of Gastrointes-
tinal Hemorrhage

George G. Spellman, M.D., Sioux City 11

Hemolytic Anemia

Harold Margulies, M.D., Des Moines ... 15

Changes in Communicable Disease Rules

Abraham Gelperin, M.D., Dr. P.H.,
Des Moines 17

State University of Iowa College of Medicine

Clinical Pathologic Conference 19

(Continued on page iv)

*Hard-hitting
Antibiotic*

IN TABLETS AND
PEDIATRIC LIQUID

ILOTYCIN

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the originator of Erythromycin

JANUARY, 1954

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No. 1

Problems That Arise in the Use of the Intramedullary Fixation Principle In Fractures

JAMES K. STACK, M.D.*
CHICAGO, ILLINOIS

THERE ARE FIVE basic methods used in the treatment of fractures. Each has its own principles, indications, and uses, and each has its own advocates. Each, too, has its limitations, and what not to do and when not to do it are less likely to be learned from didactic teaching than in the "school of hard knocks." To enumerate, the methods are: (1) closed reduction and external fixation with casts, splints, braces and other devices; (2) closed reduction by the gradual exertion of traction and counter-traction forces and the maintenance of position by the balanced suspension of the limb—a technic which requires bed rest during the greater part of the healing period, and usually some form of ambulatory fixation later; (3) open reduction with internal fixation, by means of plates, screws, wires, bands, pegs, etc. of various materials—a fixation which is many times not secure enough to be completely independent of external support; (4) external skeletal fixation which utilizes the principles of closed reduction, but with the maintenance of position by pins and wires that are inserted completely into or through the bone above and below the fracture, the external position of these pins being then held together by special devices or by plaster of Paris; (5) intramedullary fixation, which is based on the principle that a fracture in any bone with a medullary canal can be maintained after open or closed reduction if one fills the canal with a metal-

lic rod or pin of sufficient length to engage the cancellous bone in the proximal and distal ends.

The intramedullary fixation principle is now accepted as the treatment of choice in certain fractures under certain conditions. Although its acceptance has been rather rapid and spectacular in this country, the refinements of the method have been evolved over a long period of time.

Beginnings are vague and shadowy things, and it is difficult sometimes to isolate the essential features of the origin of any given method. Which is most important? Is it the germ thought itself? Is it the first application of its principles? Or is it the persistence of an individual in popularizing an idea or project which is the important feature of its origin?

Nicholayson (1897), Delbet (1906), Lambotte (1913), Hey-Grove (1917), Rush (1936) and Kuntscher (1940) all participated in the evolution of this method. It has had the remissions and exacerbations of so many of the ultimately useful things. One can compare its vicissitudes with the delayed acceptance in this country of the suction-socket limb. It, too, was thought to be an outgrowth of World War II until someone pointed out that the first patent in the United States, at least, for a valve to maintain suction on a leg prosthesis was granted by the United States Patent Office in 1863.

The Kuntscher nail and its application constitute "a virtue born of necessity." The original application was for the transportation of German soldiers who had sustained fractures of the femur. It was used as more or less an emergency pro-

* Associate Professor of Bone and Joint Surgery, Northwestern University Medical School; Attending Orthopedic Surgeon, Passavant Memorial Hospital and Cook County Hospital, Chicago, Illinois.



Figure 1. The presence of an intramedullary nail does not guarantee healing. This fracture is 16 months old, and, while clinically stable, with the rod in place, healing is not complete.

cedure. It was then noted, upon arrival of the soldier in the zone of the interior, that the continuation of this treatment method was feasible, and, as time went on, it then became an elective as well as an emergency measure.

In the femur, the method is most suitable in those fractures that are transverse or mildly oblique without important comminution of either fragment, and are situated within the middle third of the bone. It may also be used for the fixation of pathologic fractures with or without resection of the involved portion of the bone. And here, because of the seriousness of the situation, greater liberties may be taken as far as the location of the pathologic fracture within the femur is concerned. It has proved useful in the maintenance of the bone following shortening operations and as an adjunct in bone-grafting procedures for delayed or non-union. The method has also been used in fractures of the humerus, both bones of the forearm, the tibia, the metatarsals and the metacarpals. It has also been shown to have certain advantages in the maintenance of the knee after arthrodesis. It is in the femur, however, that the Kuntscher nail has attained its greatest popularity—popularity attested to by the fact that during the year 1951 as many as 67 articles were pub-

lished in the American literature concerning this method in the treatment of human fractures, and 6 papers described its use in the treatment of fractures in animals.

Outside the femur, the intramedullary fixation method seems best adapted to fractures through the proximal third of the ulna, as seen typically in the so-called Monteggia lesion, in which an anterior dislocation of the radius accompanies the fracture of the ulna. It has achieved rather wide acceptance in the management of those fractures of the clavicle which cannot be handled by the usual closed methods.

Certain anatomic facts about the femur should be borne in mind if the Kuntscher nail treatment is contemplated. The medullary canal of the human femur is not round; it is oval and has its greatest width in the sagittal plane of the bone. The width is not uniform from its proximal through to its distal end. There is a definite and constant constriction or isthmus near the junction of the middle and upper thirds. The femur is not parallel to the weight-bearing line of the lower extremity, but courses medially. The femur is not straight, but has a well-defined anterior bow which is likely to be accentuated in older

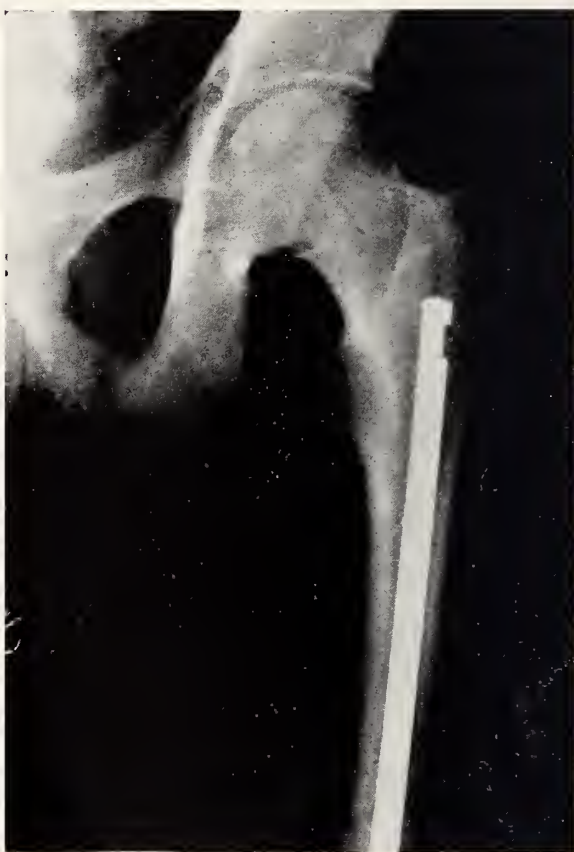


Figure 2. This complication is the result of poor selection of the nail. In order to get firm fixation in the lower fragment, it had to be buried, as seen above. Considerable difficulty will no doubt be encountered when the time comes for its removal.

people. Variations in the size and contour of the medullary canal, as well as the abnormal bowing in one plane or another which are found in certain pathologic conditions, may require pinning after fracture. Examples of these are the osteitis deformans of Paget, the residuum of rickets, fibrous dysplasia of bone, hyperparathyroidism, etc. Unfortunately, there is no rule of thumb by which one can ascertain the shape of the femur or the variations in its medullary canal from observing the individual body type.

There is no age group, with the exception of growing children, that need be excluded from the advantages of this method, and, as a rule, any older patient whose debility would not exclude, for instance, the pinning of a hip fracture, is a suitable candidate for intramedullary fixation of a shaft fracture, provided that the fracture meets the general qualifications mentioned previously.

Three principal types of nails have been perfected: the clover-leaf, the diamond-shaped and the flanged. Each has its advantages and its advocates, and each, too, has its special instruments for insertion and extraction. Since a complete set of nails and instruments is an expensive item, it is best for the surgeon to choose the one with which he is most familiar, and become proficient in its use. The nails vary in length and width, and the preoperative choice is most important. This choice is usually based on an x-ray examination of the sound femur. Ratios are then established between the length of the bone and the length of the nail, and between the width of the canal and the width of the nail. This ratio is subsequently revised as one attempts to correct for the distortions which are present on the x-ray film to forecast the actual conditions which he will meet in the operating room. The surgeon must then decide between the open and closed procedures, and, if he decides upon the open method, he may then insert the nail in either a direct or a retrograde fashion. Kuntscher's original application was by way of the closed route, the nail being driven from the trochanteric fossa into the upper fragment, after which the femur was reduced under fluoroscopic or x-ray control and then the nail was driven into the lower fragment. This method was undoubtedly dictated by the unfavorable conditions under which the nail was originally used. In this country, open reduction and retrograde nailing is the method of choice—a choice which is made, at least partially, because of the plentiful supply of antibiotics available to us as compared to what is available to surgeons in other parts of the world.

The surgical approach to the fracture site is similar to that used in the plating procedure. The skin and fascia are incised laterally. The lateral muscle mass is then reflected forward from its posterior attachment to the femoral shaft, and leverage-type retractors are then used to permit inspection of the bone ends. At this time, the size

of the nail chosen can be tested in the open end of the canal of the proximal fragment. The end of this fragment can usually be brought readily out-

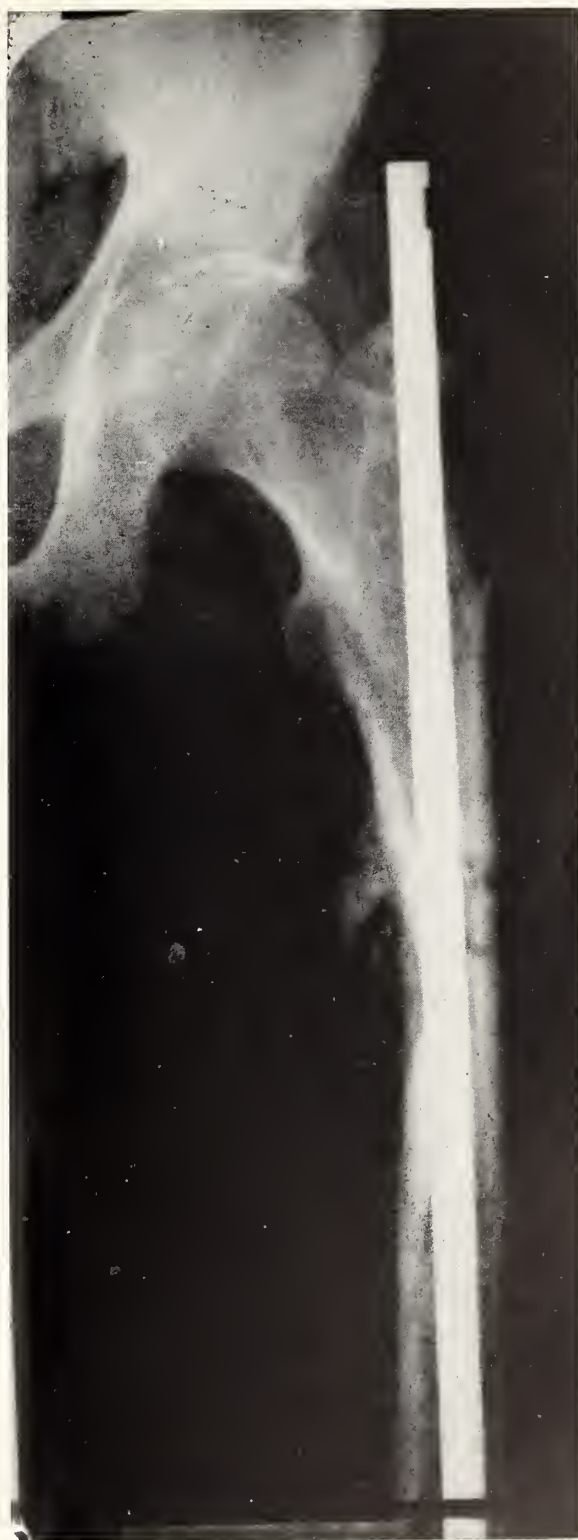


Figure 3. This nail is too long, and there has developed over it a painful bursa.

side the wound, and, if there is any question about the nail's passage through the femoral isthmus, then this isthmus can be enlarged by drilling. Because the patient is lying on the sound side, with the hip of the fractured side flexed, there is no difficulty in managing the end of the nail as it appears outside the buttock. The fragments are then aligned and locked into position by the end of the nail that is protruding from the fractured surface of the proximal fragment. It is then driven into the distal fragment to a point within the condylar bone, where the cancellous nature of this bone will grip it and tend to prevent rotation. Before the nail is securely engaged in the distal fragment, the surgeon must be sure that the rotatory alignment of the two fragments is as perfect as the alignment in the antero-posterior and lateral planes. It can readily be seen that, with the patient on his side, mistakes in rotatory alignment are possible, and the usual one is that the fracture is secured with the lower fragment in external rotation. If the assistant, who is holding the leg, will align the middle of the patella with the antero-superior iliac spine and the space between the second and third toes, the resultant position will be satisfactory. It has been our practice to take at least one x-ray of the knee region just before the nail is driven home to be sure that it will not penetrate into the knee joint or fall short of the cancellous portion of the metaphyseal area. The problems associated with the proximal end of the pin are not so weighty. Yet, a pin that is too long will have developed over it an adventitious bursa which may be tender and painful, and a pin that is too short will have to be driven into the bone at the base of the femoral neck, and considerable difficulty may be encountered at the time of its removal.

No postoperative external fixation is necessary, other than a pressure dressing, and it has been our practice to break the foot of the Gatch bed so that the knee is slightly flexed and the leg elevated. This position will tend to keep the leg from dropping into external rotation and will also enable the patient to get leverage to lift the heel off the bed, and, thus, start his quadriceps exercise program early in the postoperative period. There are no set rules about the number of days of bed rest, and we permit the younger, agile group of patients bathroom privileges on crutches just about any time they choose, provided, of course, that no weight is borne on the affected side. The older age group are encouraged in their quadriceps exercises and instructed in the use of the trapeze to exercise their arms and areate their lungs, but the day of ambulation is usually not in the immediate postoperative period. It is perfectly proper to permit a patient who is crutch-walking to put the affected foot down for balance without actually forcing it to bear weight, and any important degree of weight-bearing is not permitted until he has sufficient callus to aid

in keeping the nail from bending. Too early weight-bearing may compromise the nail and cause it to bend or break, and thus, the patient will be subjected to another surgical procedure, or he will have to be returned to one of the older methods of treatment. It has been our experience that this method does not shorten the true healing time of a femoral-shaft fracture. The nail has no osteogenetic powers, and delayed union or non-union can and does occur even in this method.

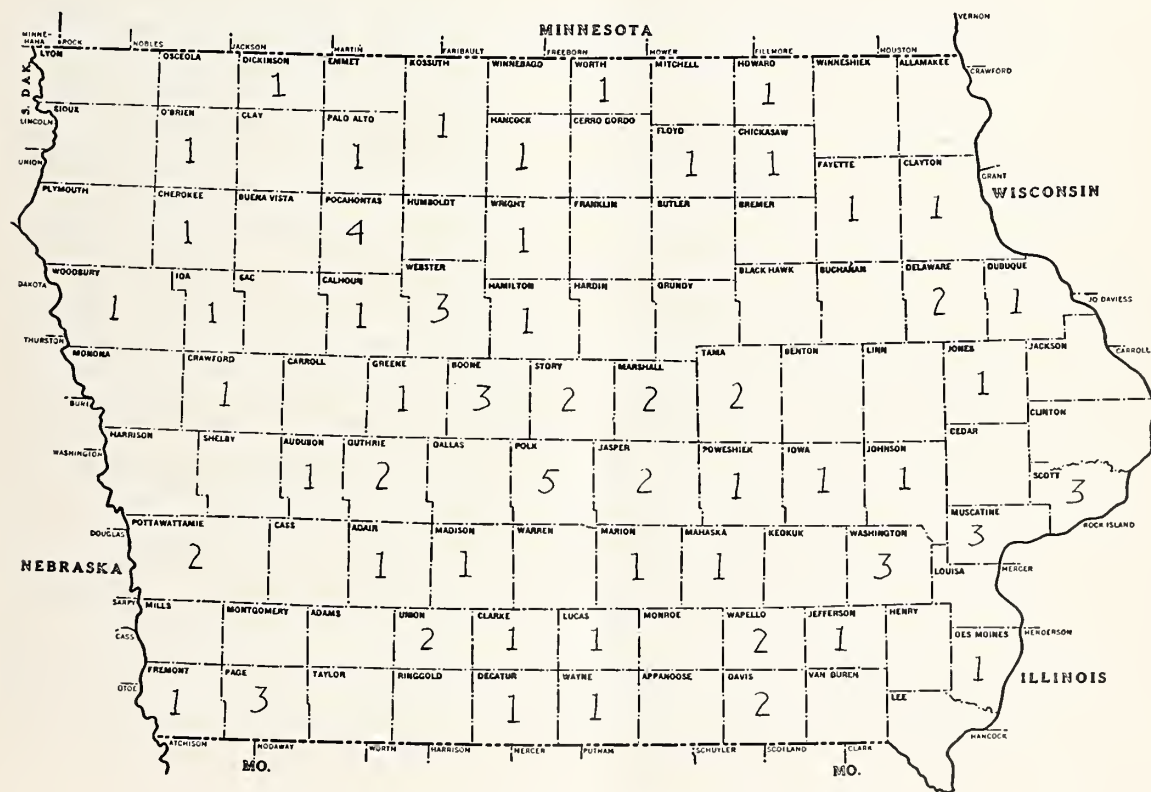
There are complications, although one of our



Figure 4. An excellent example of Wolff's law showing the formation of strong callus on the medial side of the fracture in response to the pressure applied by the adductor muscle group. The fracture line, itself, is not yet obliterated.

British colleagues has said that he dislikes to discuss the complications of this method because he feels very much as if he were talking about the faults of an old friend. It has been said that there is no method of managing suitable femoral-shaft fractures quite so wonderful when all goes well, but, also, there is no method quite so terrible when certain complications arise. Some of these complications, to those who have experienced them, remain unforgettable. They can usually be divided into four groups: 1. There are those that result from poor choice—i.e., an attempt to use the method in a type of fracture for which it was not designed. 2. There are those which arise from faulty technique, such as improper choice of nail, or no preoperative choice at all, improper positioning on the table, insufficient help during the operation, difficulties with the knee or the buttock because of a nail that is too long, malpositions which have been mentioned before, and impalement of the nail in the region of the isthmus so that it cannot be driven through and cannot be extracted, and the instruments are broken in the attempts at extraction. In such circumstances, one finally ends up sending for the janitor's hack-saw, and

treating the patient by suspension traction. 3. Certain complications occur during the healing period, such as bending or breaking of the nail due to premature weight-bearing, external rotation contracture of the hip, particularly in older people, as a result of one's permitting them to lie in a position of flexion abduction and external rotation for too long a period. Intense atrophy of the quadriceps muscle can occur if exercises are not outlined early and insisted upon. Limitation of motion in the knee can occur in this as in any other method, if the surgeon is not insistent on both passive and active movement of this joint. A nail that is too short and does not have a good grip in the cancellous bone of the lower end of the femur may wander proximally and protrude beneath the skin of the buttock so that it will have to be redriven or replaced by one of suitable length. 4. Lateral bowing of the femur can result from chronic osteomyelitis by infection introduced at the time of nailing, from delayed union or non-union, or from premature extraction of the nail. As far as fat embolism is concerned, it has been pretty well established by now that the incidence of this complication is no greater in those instances in which the nail has been used.



Representation at the October 25, 1953, Presidents' and Secretaries' Conference

The Autonomic Nervous System Clinical Application

LOUIS T. PALUMBO, M.D.*
DES MOINES

IN A PREVIOUS ISSUE,** the basic principles of the anatomy of this complex system was presented. I desire, in this concluding section, to present some of the clinical physiology as it is related to the diseases or conditions we are confronted with in our practices and to show how this knowledge is being applied in present day therapy.

Generally, the parasympathetics and sympathetics are opposed in action. In some areas of the body one may predominate over the other. Both of these divisions supply all of the structures or organs containing smooth muscles, glandular structures or organs, cardiac musculature, and sweat and sebaceous glands.

The sympathetics are more important clinically in reference to their action upon the vascular tree, particularly of the extremities, the heart, and the endocrine glands. Stimulation of the sympathetic supply to the extremities results in vasoconstriction of the blood vessels and increased secretion of the sweat and sebaceous glands. Division or paralysis of this nerve supply would result in a marked vasodilatation and cessation of sweating of the portion of the body so denervated.

These important functions can be altered by diseases or other conditions affecting the circulation to an extremity, digit, or sweat and heat regulating mechanisms of the body. Thus patients with peripheral vascular diseases with or without an associated vasospastic element, with coldness and clamminess of the extremity as a result of excessive sweating, can be improved from the standpoint of their symptoms, and helped as regards the warmth and dryness of the extremity, by means of a lumbar or dorsal sympathectomy for denervation of the lower or upper extremity, as the case may be. In order properly to denervate the sympathetic supply to the upper extremity (Fig. 1a and b), removal of most medial portions of the second and third intercostal nerves and associated rami communicantes and division of the sympathetic trunk below the third ganglion (a modified Smithwick procedure) are necessary. This surgery is accomplished through a posterior

extrapleural approach, resecting the angles of the second and third ribs. A stellate ganglionectomy has come to be regarded as inadequate in that it does not completely denervate the upper extremity. The newer and accepted procedure, advocated by Smithwick, precludes one of the undesirable sequelae of the older operation, namely, a Horner's syndrome.

A lumbar sympathectomy with the removal of the second, third, and fourth ganglia and the associated chain will result in a denervation of the lower extremity from the sacrum to the toes posteriorly and from above the knees to the tips of the toes anteriorly (Fig. 2a and b). This operation is performed through a muscle-splitting incision placed at the level of the umbilicus. All muscles of the anterior abdominal wall are split, and the chain is reached through a retroperitoneal approach.

These two operations are performed for a great variety of conditions; time and space do not permit a lengthy presentation of the various complaints and physical findings of them. Suffice it to say that included in this group are: peripheral vascular diseases such as peripheral arteriosclerosis with or without diabetes, Buerger's disease (thrombo-angiitis obliterans), immersion or trench feet, frostbite, Raynaud's disease; scleroderma, hyperhidrosis; chronic thrombophlebitis; A-V aneurysm or A-V fistula; chronic leg ulcers; arterial embolus or thrombosis; saddle thrombosis of the abdominal aorta; unclassified peripheral vascular diseases; Sudeck's atrophy; causalgia; and phantom limb.

The sympathetics are important in the complex mechanism responsible for essential hypertension. Sympathectomy and splanchnicectomy have been and are performed in a select group of patients in the treatment of high blood pressure. The release of vasospasm and the creation of a large reservoir in the vascular splanchnic and lower extremity beds, particularly when the patient is in the erect position, has been and is partially the rationale for this operation. In addition, the sympathectomy increases the blood flow through the kidneys to counteract the renal factor, and it also denervates the adrenals, thereby influencing their various functions, particularly in relation to their secretion of adrenaline and other hormones related to fluid and salt metabolism, both of which play an important part in maintaining blood pressure.

In order to denervate them, the sympathetic

* From the Department of Surgery, Veterans Administration Hospital, Des Moines, Iowa. This article is sponsored by the Veterans Administration with the approval of the Chief Medical Director. Statements and conclusions published by the author are the results of his own studies and do not necessarily reflect the opinion or policy of the Veterans Administration.

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chain is removed from the 5th or 7th dorsal segments down to or through the 2nd or 3rd lumbar levels (Fig. 3). In addition, all of the greater, lesser, and least splanchnic nerves are likewise resected. This is accomplished bilaterally, usually one side at a time, at intervals of two weeks. The approach to these structures can be made by one of many ways: by a transthoracic incision, by a retropleural one, removing small portions of the 11th and 12th ribs, or by a combined thoracic and retro-abdominal incision.

Splanchnicectomy, with a lower dorsal and upper lumbar sympathectomy, is advocated also for the treatment of chronic recurrent pancreatitis, for calcinosis and calculosis of the pancreas, and for a post-cholecystectomy syndrome.

The rationale for this operation is based upon the fact that the disabling pain accompanying these diseases is referred from the sympathetics by way of the visceral afferent pathways which are contained within the greater and lesser splanchnic nerves, the 11th and 12th dorsal and 1st and 2nd lumbar sympathetic ganglia and neurones. These pathways supply the viscera and

tissues involved by these disease processes. The operation does not correct or cure the disease or underlying causes, but relieves the patient of his disabling distress and permits him to live in comfort.

Dorsal sympathectomy has been employed in the treatment of angina pectoris, coronary insufficiency, and recurrent coronary occlusion, as well as auricular tachycardia and tachycardia associated with hypertension. Recently, several neurosurgeons have advocated this operation in some cases of advanced decompensated heart disease, particularly in those cases that do not respond to medical management.

Sympathectomy for denervation of the heart has had its shortcomings in the past, due to the fact that an incomplete procedure was utilized. A stellate ganglionectomy is totally inadequate to divide all of the sympathetic pathways to the heart, since the fibers go directly from the dorsal (thoracic) one to five levels bilaterally, besides those that ascend the sympathetic chain to the three cervical ganglia. Today, the procedure of a posterior approach, with removal of the first five

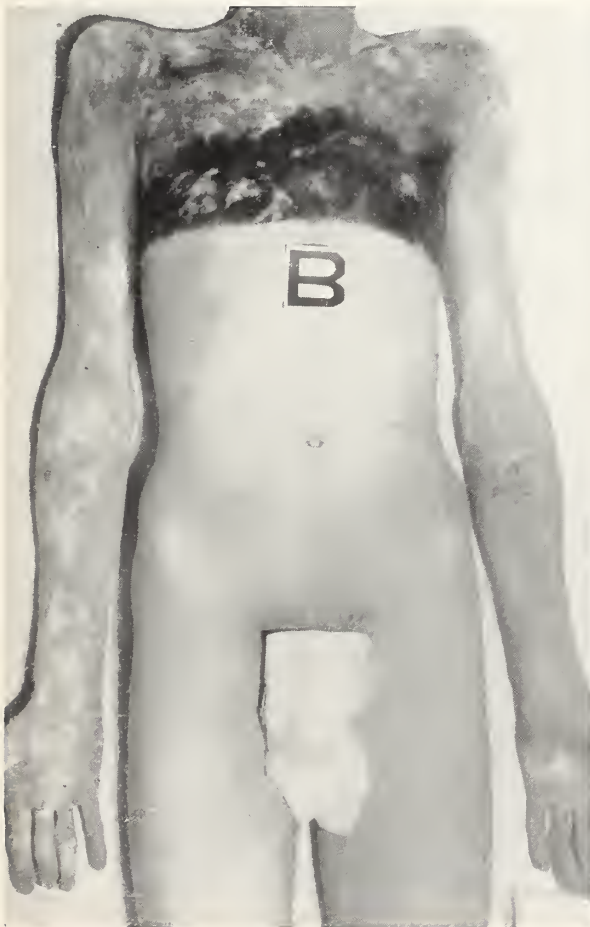


Figure 1a



Figure 1b

Light areas reveal complete bilateral sympathetic denervation by dorsal sympathectomy of the entire upper extremities, including the shoulders, hands, and fingers.

dorsal ganglia and associated chain, will denervate the heart of all its sympathetic supply, but will not result in a Horner's syndrome, since the operation does not destroy the inferior cervical ganglion. This procedure can now be performed through a transthoracic, transpleural approach, bilaterally, at intervals of two weeks.

Stimulation of the sympathetics to the heart will result in cardiac acceleration. In addition, the visceral afferent (pain pathways) fibers pass by way of the sympathetics. Thus, in order to free the patient from cardiac pain due to various causes, all of these pathways should be interrupted. This operation will also increase the coronary circulation by producing vasodilatation of the coronary vessels.

A presacral sympathectomy can be performed for the relief of severe dysmenorrhea. The fibers of the sympathetics arise from the upper lumbar chain and pass by way of the hypogastric plexus to the structures in the pelvis.

Operations upon the parasympathetic portion of the autonomic nervous system have gained a great deal of recognition since Dragstedt's re-

port in 1943 on vagotomy. An infradiaphragmatic vagus resection, partial vagus neurectomy, vagotomy or vagectomy (terms commonly used) has been and is employed for the treatment of chronic duodenal ulcer, marginal or jejunal ulcer, select cases of chronic idiopathic ulcerative colitis, regional enteritis, and chronic pancreatitis, pancreatic calcinosis or calculosis.

The division or sectioning of the vagus nerves is now accomplished below the diaphragm along the esophagus, just above the cardio-esophageal area. Usually several inches of the nerve trunks and associated branches are removed. In this manner, re-establishment of the pathways by means of regeneration can be prevented. The autonomic nervous system has a greater ability for regeneration than have the peripheral somatic nerves. The vagus nerves are composed of preganglionic neurones. Their synapse does not occur until the fibers reach the tissue or organ which they innervate.

Stimulation of the trunks of the vagus below the diaphragm results in muscular contraction of all of the smooth muscles of the stomach, duo-



Figure 2a



Figure 2b

Typical sympathetic denervation of lower extremities following a lumbar sympathectomy with removal of the 2nd, 3rd, and 4th ganglia and associated chain. Anteriorly the denervation or loss of sweating occurs from the knee to the tips of the toes and posteriorly from the sacrum to the toes.

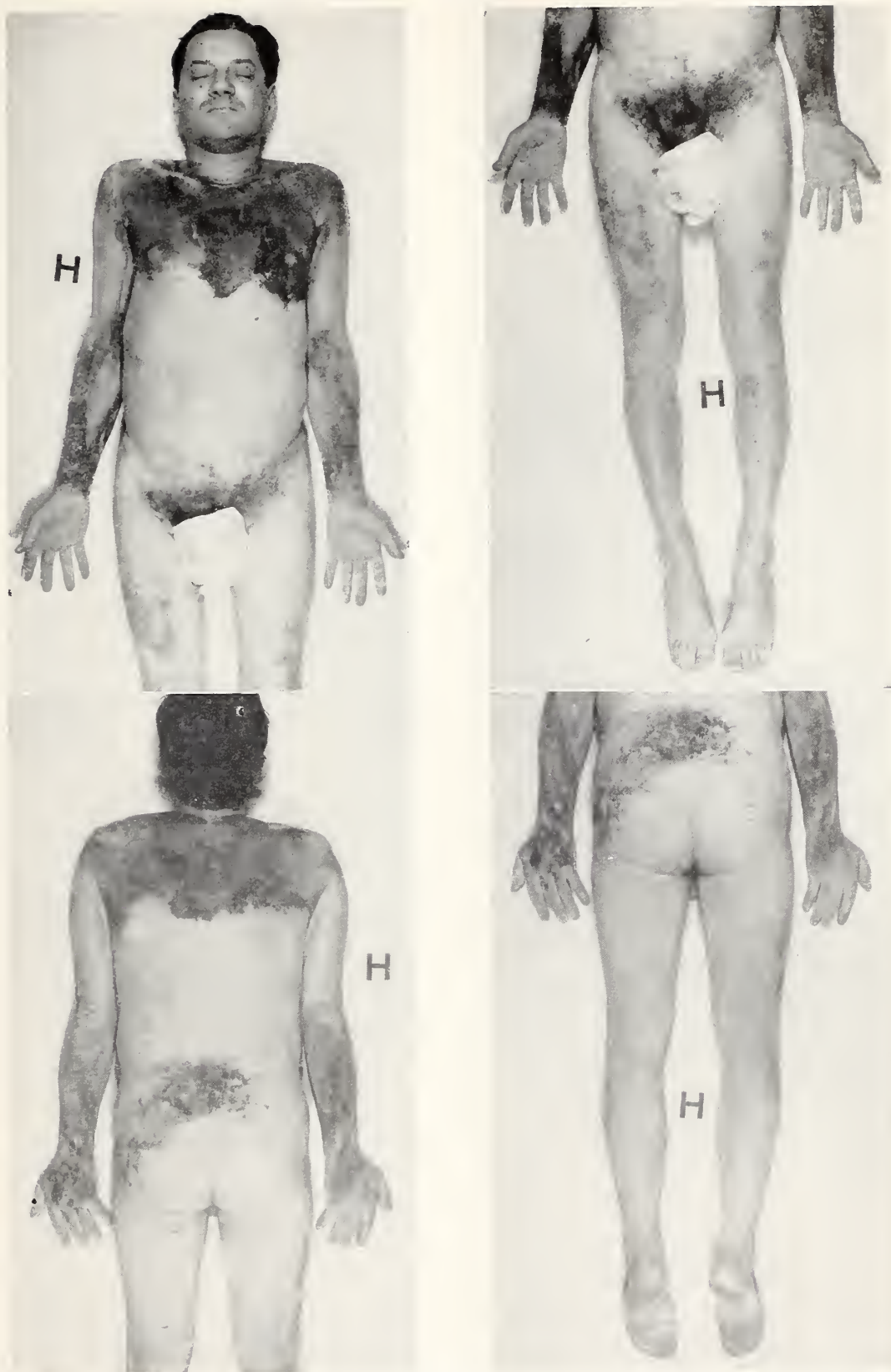


Figure 3. Typical denervation pattern following a bilateral thoracolumbar sympathectomy and splanchnicectomy. There is absence of sweating (light areas) anteriorly from the nipple to the tips of the toes and posteriorly from the mid-back to the toes, except for a small area of sweating over the sacrum posteriorly and in the groin area anteriorly.

denum, and small bowel, and usually the first half or two-thirds of the colon. In other words, it produces gastrointestinal peristalsis. In addition, vagal stimulation results in the increased secretion of gastric juices, both in total volume and in free hydrochloric acid production. Therefore, the vagus plays an important part, from the cephalic phase of digestion and acid secretion, in the normal physiology of gastric function. In patients with peptic ulcer, the cephalic phase is usually augmented so that the total and free-acid secretions and total volume of gastric juices are markedly increased. This secretion continues in excess during the resting phase also, and because of this factor, the gastric or duodenal ulcer is kept active.

It is upon this phase of disturbed physiology of vagal activity that vagotomy or vagus resection has been of value in the surgical treatment of some cases of duodenal ulcer. The interruption of the vagus usually produces an anacidity, and in many, a complete and persistent achlorhydria. In addition, the associated gastro-duodenal spasm is eliminated. So for a short period of time, gastroplegia and the resultant delayed emptying of the stomach occur. Because of this undesirable feature of the operation, a gastroenterostomy is performed at the same time. Achlorhydria persists even after alcohol or histamine stimulation and also after a Hollander's insulin test, in which an injection of insulin stimulates the production of hypoglycemia. A hypoglycemic state in individuals with an intact vagus pathway to the stomach will produce an increase in gastric secretions, including the acid phase.

Vagus resection is employed in the treatment of marginal or jejunal ulcer. The rationale again is to reduce or eliminate acid secretion so that the ulceration can heal. Stomal ulcerations are usually due to the persistence or increase of the production of free acid in the gastric juices of the gastric remnant.

Some surgeons have advocated vagus resection for the treatment of select cases of ulcerative colitis and regional enteritis. Their concept is that the motor activity as well as the secretory function of the bowel should be reduced and that a combination of these two factors may influence the course of the disease and bring about favorable progress. However, a vagus resection alone does not completely denervate the entire colon, for the left half of the colon generally receives its parasympathetic supply from the nervi erigentes (2, 3, and 4 sacral levels). It appears to me that a more rational approach, from the standpoint of bowel innervation and physiology, is a right vagus resection, a bilateral splanchnic resection, and a section of the left nervus erigente and an upper bilateral lumbar sympathectomy. These procedures bring about a complete denervation of the small and large bowel, and thereby achieve the desired changes in the altered physi-

ology associated with these diseases. The right vagus resection should be performed below the origin of the gastric branches, and the left vagus should not be divided. In this way, the disturbances of gastric and duodenal functions can be avoided, since they are not a part of this syndrome. This technic eliminates some of the undesirable features of vagotomy which develop when the operation is performed for duodenal ulcer.

Some men have advocated vagotomy or vagus resection in the treatment of chronic recurrent pancreatitis and calcinosis or calculosis of the pancreas. The division of these nerves decreases the secretory function of this organ, reduces the distention of the glands, lowers the intraductal pressure, and lessens the amount of pain in an organ which is already fibrosed and unable to withstand increased pressure from secretory activity. But it is my opinion that the sympathetic denervation of the organ, as described elsewhere in this presentation, is a much more efficacious procedure for the relief of the disabling pain.

SUMMARY

Some of the important clinical physiology of the autonomic nervous system has been presented in relation to its clinical application.

A variety of surgical procedures upon this system have been discussed in their relationship to the treatment of many diseases and conditions affecting many vital areas and functions of the body.

S.U.I. DOCTORS ON A.M.A. PROGRAM

Faculty members of the College of Medicine at S.U.I. played a prominent role in the programs of the Interim (Clinical) Session of the American Medical Association in St. Louis, December 1-4. Dr. W. B. Bean, Head of the Department of Internal Medicine lectured before the general session on "Opportunities for Research in General Practice," and he presented a paper before the medical section on "The Tongue in Deficiency Disease."

Dr. L. E. January, from the same department, acted as moderator and internal-medicine participant in a panel discussion before the general session entitled "Stump the Experts." Later in the week, Dr. January addressed a joint session of the surgical and cardiovascular sections on "The Mitral Problem."

Dr. A. L. Sahs, of the Department of Neurology, presented a paper before the neurology and psychiatry section on "Strokes: Differential Diagnosis." The Department of Ophthalmology was represented by an exhibit on ocular prosthetics, and the Departments of Pharmacology and Surgery sponsored an exhibit entitled "Studies of Analgesia in Human Beings."

Diagnosis and Management of Gastrointestinal Hemorrhage

GEORGE G. SPELLMAN, M.D.
SIOUX CITY

GASTROINTESTINAL HEMORRHAGE is always a serious and significant condition. The problems of diagnosis and management of patients with a massive hemorrhage from the gastrointestinal tract are quite different from the problems of the patient who has bled only 50 to 60 cubic centimeters, the amount of blood required in the intestinal tract to produce a tarry stool. In the latter patient, there is no immediate threat to life, and we may unhurriedly perform the indicated diagnostic procedure. There is a threat to life and a mortality rate as high as 25 per cent (1 out of 4) in massive gastrointestinal hemorrhage.

Massive hemorrhage from the gastrointestinal tract practically always occurs from the upper section. Hemorrhages from the lower gastrointestinal tract may be severe and prolonged, but they are rarely massive in the sense that large amounts of blood are lost suddenly. A massive gastrointestinal hemorrhage may be defined as one in which the red blood cells count drops below three million and the hemoglobin below seven and one-half grams. The patient is in some stage of shock.

The mortality rate of patients with such hemorrhage from the gastrointestinal tract is 10.3 per cent for patients of all ages,¹ and it has been as high as 25 per cent in patients over the age of forty-five. The mortality rate persists in spite of the availability of blood for transfusions, intravenous fluids, early feeding of the patient as introduced by Meulengracht, and other therapeutic measures which have been devised for the treatment of shock. Actually, the mortality rate from massive gastrointestinal hemorrhage has changed very little since these procedures were introduced. Therefore, it is well to review our methods of treatment and attempt to formulate a plan of treatment for these patients.

Many articles are appearing in the literature concerning treatment, and many of them are at odds with the others. For example, some authors advise no whole blood transfusions until the blood volume has been partially replaced by electrolytes and plasma because of the danger of overloading the kidneys when the blood pressure is below the renal filtration level.^{2, 3} Another author reported a series of patients to whom blood was given in large amounts, one patient receiving 9,500 cc., with only one death in 46 patients—a mortality rate of 2.1 per cent.⁴

The patient with a massive gastrointestinal hem-

orrhage presents a double therapeutic problem. The first is the control of the hemorrhage and the shock; the second is the control of the underlying disease. The immediate treatment is directed toward the control of the hemorrhage. Of course, the methods of control will depend on the cause.

The causes of massive gastrointestinal hemorrhages are many. It is a fact that 90 per cent of such hemorrhages are due to intragastric and intraduodenal disease. Peptic ulcer alone is the etiologic factor in 85 per cent. Five per cent are due to carcinoma of the stomach and 5-10 per cent are due to ruptured esophageal varices secondary to the portal hypertension which results from cirrhosis of the liver or congestive splenomegaly such as is found in splenic anemia or Banti's syndrome. Two to three per cent are due to miscellaneous causes such as hiatus herniae, blood dyscrasia, gastritis with superficial erosions of the stomach and duodenum, polyps, both gastric and duodenal, and, rarely, prolapse of the gastric mucosa through the pylorus.

When the hemorrhaging patient is admitted, he must receive the time honored and proved bed rest, elevation of the foot of the bed, and sedation to allay his restlessness. An icebag to the abdomen may or may not help, but, as one author aptly stated, it at least makes the patient remain flat on his back and saves the doctor's explaining to the relatives why he doesn't have an icebag. If the patient is in shock, fluids are immediately started to replenish the blood volume, plasma is administered immediately and whole blood is transfused as soon as it can be made available. Lavaging the stomach with ice water and introducing two ounces of adrenalin hydrochloric 1:1000 solution into the stomach may cause enough vasoconstriction to stop the bleeding. Antacids every two hours and milk and cream on the alternate hours should be administered as soon as the patient stops vomiting. Atropine sulfate .6 mgm. (1/100 gr.) should be given hypodermically every 4 to 6 hours to quiet the stomach.

It has been satisfactorily proved by experience and experiments that there is no increased danger in elevating the blood pressure and forcing out a clot in the vessel by transfusions.^{1, 5} The fall in blood pressure probably is not the protective mechanism we once thought, but rather the reflection of the diminished blood volume due to hemorrhage. The prompt replacement of the blood not

only corrects the shock, but also lessens the cerebral and myocardial damage from anoxia.

The amount of blood prepared for the patient should be adequate. There are no good criteria for accurately determining the amount of blood lost. The hemoglobin, red blood cell count, and hematocrit initially are normal or elevated due to hemoconcentration and do not show a decrease for some hours. The elevation of the blood urea nitrogen is of value prognostically at the end of 24 hours, but initially it tells us very little. We know a massive hemorrhage has occurred if three of the following criteria are present:²

- (1) Sudden fainting.
- (2) Drop in systolic blood pressure of 50 points or more.
- (3) Blood pressure below 96 mm. mercury.
- (4) Passage of 3 or more tarry stools in 12 hours.
- (5) Hematemesis of a pint or more of blood.
- (6) Drop in red blood cell count below three million.

Knowing that a massive hemorrhage has occurred, we can use the blood pressure as a rough guide to the amount of blood the patient will need:⁶

- (1) If the blood pressure is 100 mm. mercury or over, give 500 cc. blood.
- (2) If the blood pressure is 85 to 100 mm. mercury, give 1,000 cc. blood at normal rate of transfusing.
- (3) If the blood pressure is below 85 mm. mercury, give 1,500 to 2,000 cc. of blood in first six to twelve hours. Give at a rate sufficient to maintain the blood pressure. Check it every 15 to 30 minutes.
- (4) If the blood pressure fails to rise and to stabilize at 100 mm. mercury, the patient is still bleeding and more blood should be given and other measures instituted.

The immediate problem is whether the patient is bleeding from the stomach or duodenum, from esophageal varices or because of a blood dyscrasia. While he receives the blood, as complete a history as possible is obtained from the patient or from his relatives. One carries out a careful physical examination—looking for evidences of spider nevi and enlarged liver, purpuric areas, jaundice, epigastric tenderness, supraclavicular nodes, and any other findings which might enable us to make a tentative diagnosis. A blood smear should be examined for leukemia. It is wise to do a bromsulphalein test for liver function. A history of ulcer symptoms preceding the hemorrhage, with a sudden cessation of all pain after the onset of the bleeding, justifies a tentative diagnosis of peptic ulcer.¹¹

If the patient has continued to bleed, further plans of treatment must be prepared. We must determine whether the condition present is amenable to surgical intervention. If the bleeding is due to esophageal varices, surgical therapy is likely

to be disappointing. If we don't know the site of the bleeding, the surgical attack will be extremely difficult, and perhaps the surgeon will be unable to find the bleeding site. The surgeon should be consulted early, but his presence in the case does not relieve the practitioner of the responsibility for making the diagnosis. In a recent series of 27 patients with massive gastrointestinal hemorrhage in whom the etiology could not be determined on the first admission to Boston City Hospital, surgical exploration eventually revealed the cause of the bleeding in only two more cases than had been diagnosed clinically.⁷ Sixteen of the 27 patients remained undiagnosed even after exploratory operations.

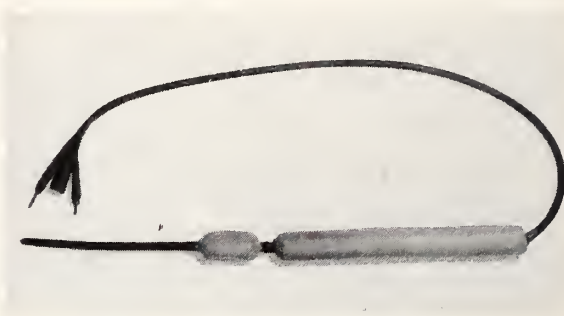


Figure 1. Sengstaken-Blakemore Tube.

A new stomach tube is now available which should prove invaluable in determining the site of bleeding. It is the triple lumen tube of Sengstaken and Blakemore, and it consists of a stomach tube with an esophageal balloon and a balloon for the cardiac end of the stomach. When this tube is in place and the balloons inflated, pressure is exerted on the lower end of the esophagus. The bleeding stops if the hemorrhage is from esophageal varices.

The tube is inserted and the balloons inflated. The stomach should then be washed with 2 ounces of powdered gel foam, followed by 50 cc. of a buffered solution of thrombin containing 250 to 1,000 units per cc.⁸ If the returns remain bloody, add the thrombin and gel foam the second time. If the bleeding stops, continue gel foam, one ounce, and 250 units of thrombin every 2 hours for 3 to 5 days. The antacid, atropine and milk regimen as outlined above should be instituted. Leave the tube in place 48 to 72 hours. Anyone who has had a patient exsanguinate from hemorrhage through an esophageal varix will appreciate the value of this tube.

X-ray investigation using the Hampton technique of passively turning the patient to the prone, supine, and various oblique positions with a minimum of gentle manual pressure may be valuable. It is contraindicated if there is still active bleeding, as manifested by hematemesis or liquid malena, shock to the extent that the patient has to receive intravenous fluids and has pallor,

tachycardia, and cooling of the skin, and if the hematocrit is below 28.⁹ If these contraindications are observed, the x-ray examination is not dangerous. It is of value not only in localizing the site of the bleeding in case surgical intervention is necessary, but also in making the diagnosis. In one series of cases, early x-ray examination was performed within 24 to 72 hours and was repeated 14 days later.¹⁰ Of 23 duodenal ulcers, 6 had healed in the two weeks, and 2 of the 10 gastric ulcers had healed.

There are no clear-cut indications for surgery, but, in general, the following factors may act as a guide:¹¹

(1) If the diagnosis of ulcer is established with the exclusion of esophageal varices and other causes of bleeding.

(2) If the patient is in shock and doesn't respond to 1,500 cc. of blood.

(3) If the patient's blood pressure is maintained only by repeated transfusions.

(4) If the hemorrhage persists or is recurrent in the first 72 hours.

(5) If the age of the patient is over 45 years.

It is better to treat the patient medically if the services of a skilled surgeon are not available.

For ulcer, the operation of choice usually is a subtotal gastric resection with excision of the ulcer. It is sometimes impossible to do this if there is a posterior duodenal ulcer penetrating into the pancreas. In these latter, a subtotal gastric resection with exclusion of the duodenum and ulcer is done. The stomach, pylorus and duodenum all may have to be opened if one is to locate the site of the bleeding accurately. If the site of the bleeding is not found, a subtotal gastric resection should be done, since it may be curative even though the source of the hemorrhage may never be established.

Perforation of an ulcer may occur with hemorrhage. This complication should be considered in these acutely ill patients. It is not common, but failure to recognize it will probably result in death of the patient.

Most patients with bleeding from the gastrointestinal tract do not have massive hemorrhages. However, any patient with melena or hematemesis has a serious condition, and the etiology must be determined and the correct treatment instituted. Hematemesis alone as a symptom and sign is much more serious than melena alone, as is shown by its five times greater mortality rate. The two symptoms often occur together. In bleeding peptic ulcer, hematemesis will occur if the stomach becomes irritated enough by the gross blood, but the absence of hematemesis in no way lessens the likelihood of peptic ulcer.

All the conditions mentioned in connection with massive hemorrhage will more often give bleeding in lesser amounts. Other conditions involving the lower gastrointestinal tract produce bleeding. Bleeding may arise in the small intestine from be-

nign and malignant tumors and inflammatory conditions, such as regional ileitis. Peptic ulceration in a Meckel's diverticulum is a "common source of melena in infants and children and may occur in adults."¹²

The large bowel is very frequently the site of the hemorrhage in gastrointestinal bleeding. Here, too, are found the tumors, benign and malignant, and the inflammatory conditions. Carcinoma of the right side of the colon is such a common cause of bleeding that it must be ruled out in every case of unexplained anemia.

Diverticulosis of the colon is common, occurring in 5 per cent of the adult population. However, it rarely causes bleeding, for ulceration of the mucosa of the diverticula is uncommon. Hemorrhoids are probably the most common source of bleeding from the gastrointestinal tract, but, not infrequently, they are secondary to a carcinoma above. Fissures of the anus often bleed.

The treatment of lesser bleeding from the gastrointestinal tract is no less important than the treatment of massive hemorrhages. The prime difference lies in the time available for instituting our therapy and our diagnostic procedures. The same careful history, physical examination, and laboratory examinations must be performed. The severity of the hemorrhage can be accurately determined within a few hours by using the red blood cell count, hemoglobin determination, and hematocrit after the initial hemoconcentration has been corrected. In 24 hours, the blood urea nitrogen parallels the severity of the hemorrhage—an elevation of 50-70 mgm. per cent indicates a moderately severe hemorrhage, and over 70 mgm. per cent, a very severe one. Bockus states that 500-600 cc. of blood in the gastrointestinal tract doubles the urea nitrogen in 8 hours.

The general measures mentioned previously regarding massive hemorrhages should be instituted immediately in all these patients, including bed rest, sedation, antispasmodic, ice bag, and indicated parenteral fluids. Early feeding, of course, is indicated if there is no vomiting.

The fear of the patient must be allayed. Remember, restlessness may be the only manifestation of anoxia, and anoxia occurs often in the hemorrhaging patient. Prompt relief of the anoxia will lessen the incidence of complicating cerebral thrombosis and coronary insufficiency, two conditions which too often follow gastrointestinal hemorrhage in patients past 45.

X-ray examinations "as soon as the patient can get on the cart" will yield an optimal diagnostic return. Esophagoscopy and gastroscopy are important. The patients with hemorrhagic gastritis, be it atrophic, hypertrophic, superficial, or post operative, can be diagnosed only with the gastroscope. Many of the marginal or anastomatic ulcers can be seen only with the gastroscope. Sigmoidoscopy is always indicated in lower gastrointestinal tract bleeding. The lower 10 inches of the

bowel is not satisfactorily visualized by x-ray. Seventy per cent of all polyps of the large intestine are within reach of the sigmoidoscope.¹³ Clinical judgment must be exercised in determining when these diagnostic procedures should be performed. The condition of the patient is the determining factor.

The first 72 hours constitute the "critical period" in these patients. At the end of that time, one will know whether he is dealing with a single hemorrhage or repeated hemorrhages. It would seem wise to wait the 72 hours before subjecting the patient to these diagnostic procedures, unless it is imperative, as might be the case in massive hemorrhages. It is not wise, either, to wait very long before performing these tests, for the diagnostic yield is so decreased.

Indications for surgery will be present in some of these patients with the non-massive hemorrhage. Tumors must be explored and excised, if possible. Repeated hemorrhages from an ulcer in spite of adequate medical care, peptic ulceration in hiatus hernia, repeated hemorrhage in gastritis, bleeding esophageal varices—all these require some surgical procedure.

For the majority of patients, the medical treatment will suffice.

SUMMARY

All hemorrhages from the gastrointestinal tract are serious. The mortality rate of massive gastrointestinal hemorrhage is 10 to 25 per cent, in spite of our increased knowledge of fluid balance, administration of intravenous fluids, blood transfusions, and early feeding regimes. More active treatment of these patients is necessary and possible. Immediate correction of shock by blood

transfusions is necessary. The diagnosis of the site of the hemorrhage can be made earlier by the use of the triple lumen tube of Sengstaken and Blake-more. The use of this tube to control the bleeding from esophageal varices is described. A regimen of the use of coagulants for the bleeding site is outlined. Early roentgen examination of the patient with gastrointestinal hemorrhage has been proved to be safe and reliable. Indications for surgery for bleeding peptic ulcer are outlined.

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Diabetes and Basal Metabolism

The second Postgraduate Course in Diabetes and Basic Metabolic Problems to be conducted by the American Diabetes Association will be offered at the Mayo Clinic, in Rochester, Minnesota, on January 18, 19 and 20, 1954.

Highlights of the Course will be lectures by Charles H. Best, C.B.E., M.D., F.R.S., co-discoverer of insulin, and by Joseph Hoet, M.D., Professor and Head of Medicine, University of Louvain, Louvain, Belgium. Dr. Best is speaking on "About the Pancreas" and Dr. Hoet is coming to this country especially to give a lecture on "Diabetes in Pregnancy." In all, there will be more than thirty-five lectures and round-table discussions.

Other topics to be taken up include "Complications of Diabetes," and "Nutritional Requirements and Diet in Diabetes."

The Course is open to non-member physicians as well as to members of the American Diabetes Association, but the number of registrants will be

limited to 125. Fees are \$40 to members, \$75 to non-members. Details of the three-day program and registration and hotel information may be obtained from J. Richard Connelly, Executive Director, American Diabetes Association, 11 West 42nd Street, New York City 36.

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Hemolytic Anemia

HAROLD MARGULIES, M.D.
DES MOINES

THIS IS A REVIEW of current thinking about some of the problems raised in the study of hemolytic anemia. It is not a comprehensive summary of the entire literature, but instead is an attempt to give an unprejudiced summary of the most important recent contributions and to correlate them with older ideas. It is appropriate to present such a discussion here for more than one reason. An obvious reason is the existence in certain patients of a disease which it is imperative that the physician recognize and treat. In addition, newer ideas of the nature of the red cell are necessarily included in the description of the syndromes. And I shall be led to speak about some of the recent techniques in immunology which have contributed greatly to the expansion of our knowledge of the disease state under scrutiny. It will be seen that some of these data should be classified under the heading of serendipity, for they have been the outgrowth of studies in somewhat unrelated fields by investigators seeking answers to unrelated questions.

The present discussion is intentionally limited to an area much smaller than the title would suggest. It is restricted to a consideration of the disease states known as congenital spherocytosis and acquired spherocytosis. It will not include the hemolytic phenomena of other entities such as sickle-cell anemia, however interesting and pertinent they may be. It will avoid, wherever possible, the insistent arguments of those investigators who have become too anxious to prove that they are right and who have, therefore, lost the impersonal attitude required in research.

Since we must talk about the erythrocyte, it is apparent that we need full knowledge of its anatomy and physiology. It is derived from the bone marrow and has a plan of development which is important. The last step in its maturation is the formation of a normoblast from which the mature red cell is formed. In the final phase just described, the cell loses volume, it loses surface area, and it loses some of the lipid which forms a part of its coating. It is well known that the erythrocyte is a biconcave disc, and it should be clear that the disc part of its shape dominates its appearance. The red cell is made up of a protein network envelope which is much thicker than we have previously thought. It is probably 0.5 micra thick, and the opposing sides are so close in the narrowed middle portion as actually to touch. The coat is a lipoprotein which is essential to normal cell function. Within the cell boundaries is a highly concentrated hemoglobin solution which is attached to the protein network by electrostatic attraction.

Any disturbance of this state is capable of changing the relationship of the hemoglobin to its cell, with a resulting hemolysis. This can be accomplished by a change in the pH of the environment or by the exposure of the cell to hypotonic solutions. The usual volume of the red cell is 90 cubic micra, and it has a surface area of 155 square micra. If the volume increases significantly, the cell becomes progressively more nearly spherical. To be a perfect sphere, the volume would have to reach 180 cubic micra. In experimental studies, the hemolysis which occurs begins at volumes much below such a level.

CONGENITAL SPHEROCYTOSIS

In congenital spherocytosis, the red cell is formed abnormally in an otherwise normal bone marrow. There is insufficient surface area for the volume of the cell, and in consequence the shape is more nearly round. In the maturation of the normoblast into a mature erythrocyte, there is a relatively greater loss of surface area than of volume.

The usual life span of a red cell is 120 days, but in congenital spherocytosis it is from 10 to 20 days. This is a consistent and fundamental phenomenon. If these spherocytic cells are transfused into normal individuals, they continue to last 10 to 20 days, thus indicating that the defect is inherent in the cell. If the cells are transfused from the patient as donor into an individual who has had his spleen removed for a reason unrelated to spherocytosis, they will last almost the full 120 days. Thus, it seems, a combination of the spherocytosis and active spleen function is necessary for the disturbance of life span to occur. Since transfused normal donor cells survive for the normal 120 days in a patient with congenital spherocytosis, the spleen alone does not produce the disease.

The clinical syndrome is the reflection of these phenomena. The abnormally shaped cells are destroyed by the normal spleen. It is likely that they are caught in the pulp more easily than is a normal red cell and that this circumstance is responsible for their unusual shape. It is also very likely that they are abnormally fragile, and that because the volume of the cell is extraordinarily large and its situation exposes it to rough treatment it undergoes greater hemolysis than normally occurs. There is good evidence that the glycolytic action of the cell is important for the maintenance of the potassium ion within the cell and of the sodium ion outside. If the spherocyte stagnates in the spleen long enough, the glycolytic action ceases, potassium passes through the cell

wall and sodium takes its place, thereby increasing the fluid content which in turn may increase hemolysis significantly.

The diagnosis of congenital spherocytosis depends upon established criteria: (1) a family history of the disease in siblings and/or preceding generations; (2) hypochromic anemia, the severity of which depends upon the extent of hemolysis; (3) icterus, also in proportion to the hemolysis; (4) elevated urobilinogen content in the feces and in the urine due to the greater amount of bilirubin which is released into the blood stream and which subsequently passes through the liver and into the bowel; (5) splenomegaly, which is a finding in all but a few well established cases; (6) hyperplasia of the bone marrow, also a constant finding as the marrow responds to excessive blood loss by greatly increased cell formation. Hyperplasia also bears a direct relationship to the degree of anemia. As hemolysis is increased, the marrow cannot compensate adequately, and anemia may become profound, despite extreme hyperplasia. There may be an exception to this during an acute hemolytic crisis, when, for a time, bone marrow function is depressed.

Laboratory tests are related to the disturbed physiology of the disease state. The bone marrow has been described. There is also evidence of increased fragility of the red cells, both in solutions of increasingly hypotonic structure and on exposure to some type of mechanical trauma. The former may be made more definite if the cells are incubated 24 hours before the test is performed. The appearance of the cell is characteristic when the disease is not too quiescent. It appears under the microscope just as described—a round cell that has lost the paler center portion which represents the biconcave shape. At times, the diagnosis will be missed if microscopic recognition of the spherocyte is required during all phases of the disease.

Congenital spherocytosis varies markedly in intensity, undergoing many spontaneous remissions and exacerbations. The treatment at any time is splenectomy, and the operation should be done when the diagnosis has been established. If the diagnosis is correct, splenectomy will lead to complete or almost complete relief of symptoms. During an acute hemolytic crisis, it is sometimes essential that a splenectomy be done as an emergency procedure. The results may be dramatic, at times restoring a patient who has appeared almost moribund. Confusion about the results of splenectomy in established congenital spherocytosis probably stems from failure to distinguish the congenital from the acquired form, or from some similar illness.

ACQUIRED SPHEROCYTOSIS

Although it has a variety of other names, the other very interesting syndrome which I propose to discuss is best called acquired spherocytosis.

Clinically there are some differences which may lead to the diagnosis and, subsequently, to the appropriate therapy. The patient may have the same symptoms as just described. There is, of course, no pertinent family history, but, as before, the patient is jaundiced, he has a fever, his spleen is enlarged, he is anemic and he may have more symptoms of gastrointestinal disturbances than are to be noted in the congenital form. Varying degrees of severity occur, and either form may prove fatal.

Although it is not final, the evidence is convincing that there is a type of immune reaction which causes this disease. There have been repeated demonstrations of the existence of an incomplete agglutinin which causes the changes in the red cells. It has been described as a globulin material which is similar to hyperimmune Rh substances and is attached to the lipid fraction of the red cell membrane. Knowledge of this phenomenon became possible only with the recent improvements in techniques for acquiring immunologic data. This globulin substance, which is firmly attached to the red cell at usual temperatures, can be removed at 57°C. It is active for all red cells, and it is agglutinated by the anti-human globulin which is prepared with rabbit blood *in vivo*. The Coombs test which demonstrates this remarkable event is done by exposing the cells under suitable conditions to serum previously prepared by injecting human blood into the rabbit, thus forming anti-human globulin in the rabbit.

The cells in this disease are normal at maturation. They developed in the bone marrow in an undisturbed fashion, in contradistinction to the faulty maturation in the congenital form. These cells will last for the full 120 days in a normal subject, but cells from a normal donor will survive in the patient for only a short time. This is probably due to the acquisition of the incomplete agglutinin by cells infused into the patient. The agglutinin, as noted above, is active for all red cells so that the type makes no difference in the attachment of the substance to the cell membrane. It is not understood why some individuals acquire this abnormal cell reaction, but it is very clear that it does not occur as a result of faulty cell maturation.

The treatment of acquired spherocytosis has very important differences from that of the congenital form. Transfusions may cause further trouble, and for some reason may actually prolong the disease. In older individuals, transfusions have caused such a marked increase in hemolytic activity as to threaten the life of the patient or even to bring about his death. On the other hand, transfusions of fresh blood to the patient with congenital spherocytosis may be lifesaving when anemia is very marked. Although there is disagreement concerning the percentage, splenectomy helps some patients with acquired spherocytosis. This confusion can be dispelled only as the disease is diagnosed

more consistently. If the patient is not responding satisfactorily and the disease appears to be prolonged, splenectomy should be considered. It is certainly successful often enough to justify the operation for such individuals. But there is probably less than a 50 per cent chance that the patient will be cured or markedly improved by splenectomy.

At present, preliminary studies on the use of ACTH and cortisone are encouraging enough to justify further trial. There have been some case reports of very marked response, with partial or total disappearance of spherocytes. It is reasonable that these substances may be helpful because of their role in altering immune reactions. But because the disease also undergoes spontaneous remissions and exacerbations, evaluation of any treatment is hazardous. It is apparent that the differential diagnosis between these syndromes is extremely important, especially in the more severe phases. There remains some doubt that all

patients with acquired spherocytosis will show a positive Coombs test, but a positive test is very strong evidence to support the diagnosis and may in time become a prerequisite.

SUMMARY

1. The current understanding of the anatomy and physiology of the red cell as it pertains to spherocytosis was reviewed.

2. Congenital spherocytosis was described as a disease arising from the faulty maturation of red cells in the bone marrow and causing a recognizable syndrome treated by splenectomy.

3. Acquired spherocytosis was described as a disease occurring when normally developed red cells are altered by a globulin substance. It also produces a recognizable syndrome, but is treated somewhat differently.

4. Careful distinction between these forms of the disease is essential for the use of appropriate treatment, and it may be life saving.

Changes in Communicable Disease Rules

ABRAHAM GELPERIN, M.D., Dr. P.H.*

DES MOINES

The Iowa State Department of Health believes that the modern use of sulfonamides and antibiotics in prophylaxis and treatment of communicable disease is very definitely reducing both the period and degree of infectivity of these diseases.

With this in mind we entered into a series of conferences two years ago with Abraham Gelperin, M.D., Director, Des Moines-Polk County Health Department, and other physicians in Polk County to draw up a set of trial control procedures for communicable disease in Polk County.

When it became apparent that these modifications were working successfully in Polk County, we suggested certain other counties also try them, after approval of their county medical societies and their county and city boards of health.

If it becomes apparent that our physicians and others interested in communicable disease control prefer these modifications, the State Department of Health will start negotiations toward getting them adopted as official rules and regulations.

RALPH H. HEEREN, M.D.
Deputy Commissioner

By Approval of:

EDMUND G. ZIMMERER, M.D.
Commissioner

PROGRAMS FOR COMMUNICABLE disease control slowly change as a result of the evaluation of natural and man-made modifications in the host-parasite relationship. Disease is as variable as man; therefore, a study of host-parasite antagonism and interaction through the decades is important. Measles, scarlet fever, meningococcal meningitis, diphtheria, whooping cough, and diarrhea are no longer important causes of child and infant death. Except for the four common childhood virus diseases (measles, German measles, mumps, and chickenpox), the serious childhood illnesses have declined in incidence, as well as in mortality, for reasons such as immunization, decrease in the size of the average American family, refrigeration, pasteurization, sanitary packaging of food, natural modifications in parasite virulence and loss of rural isolation, as well as specific sera, sulfa drugs and antibiotics. Mortality has receded markedly or has reached zero. Health department regulations and practices therefore must periodically be re-evaluated and modified in accordance with changes in the host-parasite relationship, and with newly available and utilized therapeutics and preventives.^{1, 2}

In November, 1951, the Child Health and Welfare Committee of the Polk County Medical Society,

* Director, Des Moines-Polk County Health Departments.

the Director of the Des Moines-Polk County Health Departments and the Directors of the Communicable Disease and the Maternal and Child Health Divisions of the State Health Department met to discuss communicable disease regulations and practices in Polk County. The results of the meeting may be summarized as follows:

1. It was agreed that the marked changes which have occurred in the morbidity of some and mortality of most of the communicable diseases, and the availability and wide medical usage of effective therapeutics and preventives require a re-evaluation of present regulations.

2. It was recognized that communicable disease regulations permitting the medical profession to use those therapeutics and preventives have been promulgated in other communities by the concerted action of local medical societies and health departments, with salutary effects.

3. It was agreed unanimously that modification of present practices should be initiated in Polk County.

4. Coordination with such groups as schools, hospitals, nursing organizations, was emphasized. In addition, it was the opinion of the conferees that the widest publicity to the people of Polk County by the Medical Society and local health departments is mandatory in order to insure understanding and cooperation.

The State Health Department gave approval to a trial demonstration; and the County Medical Society also approved the conclusions of its committee. The Des Moines city and Polk County boards of health and all the boards of education in the county were apprised of these actions. They unanimously concurred. As addenda, the latter group also approved uniform regulations for all schools in the county, irrespective of location or jurisdiction.³ All interested and affected groups cooperated in the widest publicizing of the new regulations. Physicians in their daily contacts with patients and families, and the health department in frequent presentations to clubs, groups, organizations and societies spearheaded the important job of public education.

The program as instituted can be summarized as follows:

1. The minimum period of isolation of patients with communicable diseases is unchanged.

2. The use of placards for all communicable diseases is at the discretion of the director of public health. They will not be used when there is adequate isolation of the patient and adequate medical attention. Tuberculosis is included in this group.

3. Antibiotic prophylaxis for familial and other intimate contacts to a case of scarlet fever or streptococcal upper-respiratory-tract disease is discretionary with the family physician. The doctor may employ any antibiotic with any regime, provided the contact is adequately protected for

the seven-days quarantine period—for example, 600,000 u procaine penicillin G with 2 per cent aluminum monostearate for a 150 lb. high school lad, given once. If antibiotic prophylaxis is employed, the quarantinable contacts may go back to school or to work 24 hours after administration. Adequate isolation and treatment of the patient is the prerequisite to this routine.

4. Antibiotic or sulpha-drug prophylaxis of familial and other intimate contacts of a patient with meningococcal meningitis is also at the discretion of the family physician. One or two grams of a sulpha drug for 3 days, for example, may be employed. Adequate isolation and treatment of the patient is again the prerequisite.

5. Contacts to a case of pertussis fall into two categories, those who have had previous vaccine prophylaxis and those with no history of specific immunization. In the former instance, a single booster is recommended, provided the prophylactic inoculations have not been administered during the previous year and the contact is under 12 years of age. These children may continue in school. In the latter instance, child contacts are to be excluded for two weeks unless immunization is immediately initiated and the second and third injections are given at two-week intervals, instead of four weeks apart.

Immunization against pertussis of unprotected familial or intimate contacts over 12 years of age, as described in paragraph 5, is to be initiated with caution. The older teen-age contact may forego this preventive inoculation, depending upon the judgment of the family physician.

6. A new regulation for infectious hepatitis is included. School children with disease are excluded for a minimum of four weeks, to insure adequate recovery from this treacherous disease. All familial and intimate contacts are given gamma globulin by the family doctor according to an agreed schedule, i.e., 1cc per 25 lbs., to a maximum of 4 cc. Since the state regulation for infectious-hepatitis isolation is seven days, the family physician's judgment will determine when an adult may be released for work or other duties.

7. Contacts of patients with measles, German measles, mumps and chickenpox are not quarantined. Gamma globulin is recommended for modification of measles in child contacts. All school personnel is informed that contacts of the four virus diseases are to be inspected each day as a part of home-room morning inspection by the home-room teacher, and when first signs of illness appear, referred to the school nurse or to the family doctor if there is no school nurse available. In this regard, through every channel of communication the community must be informed that it is best for children to have these childhood diseases during childhood.^{1, 2}

8. Local regulations concerning other communicable diseases, such as poliomyelitis, scabies, ringworm of the scalp, impetigo, diphtheria, etc.,

are as listed in section IV B 3 of the Rules and Regulations of the Control of Communicable Diseases, State Health Department.

9. An intimate contact is any person who has spent time in the home of the patient with said patient during the prodromal-symptom period of the disease in question, or has been a playmate of the patient during the period just mentioned. It is not to include contacts in the school room or during normal working relations except under very unusual circumstances. This definition is applicable to all the communicable diseases described above.

The new regime in communicable disease control has been in effect in Polk County for two years. With the wholehearted backing and co-

operation of the county's physicians, the participation of the affected agencies such as schools and hospitals, and the understanding of an informed community, our local program now has complete acceptance. The presently accepted medical practices in the care and management of the communicable diseases have, in a sense, been legalized and, to some degree, standardized.

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State University of Iowa College of Medicine Clinical Pathologic Conference

October 14, 1953

SUMMARY OF CLINICAL FINDINGS

A 59 YEAR OLD trucker was admitted to the University Hospitals. The accompanying relatives related the following history. Five days before admission the patient sprained his back while at work and was unable to continue his activities. The same evening he complained of a sore neck, but otherwise his condition was satisfactory. Sometime during the night, the patient awoke with a severe headache and was admitted to a local hospital. A short time later he became lethargic and febrile.

For many years the patient had had coarse physical features. The size of the head and hands had continued to increase. For several years he had been a diabetic and was taking ten units of regular insulin one to two times a day. Additional symptoms included nocturia and three stools per day.

On admission, the patient was lethargic, but could be aroused. He would sit up on command, grasp with both hands, and carry out other similar acts as directed. He was disoriented in all spheres, confused, and extremely restless. There was moderate dyspnea. The blood pressure was 150/90 mm. Hg. The temperature was 103.6 degrees F. The pulse rate was 106, and the respiratory rate was 42 per minute. There was enlargement of the head, with prognathism. The antero-posterior diameter of the chest equalled the transverse. The hands and feet were extremely large. Examination of the neck revealed moderate resistance on anteflexion. The ocular rotations were normal. The diameter of the pupils measured 2

mm. on the right and 3 mm. on the left. The light reflexes were normal. Funduscopic examination revealed mild arteriosclerotic changes in the vessels. Examination of the chest revealed dullness in both bases. The breath sounds were absent in the lower lung fields posteriorly. Occasional moist rales and expiratory wheezes were audible in the right mid-lung posteriorly. Both inspiratory and expiratory wheezes were audible in the left mid-lung field anteriorly. There was moderate left-ventricular enlargement. A systolic murmur was heard at the apex. The liver edge was palpable below the right costal margin and was tender. The testes were small and atrophic.

The patient was able to move all four extremities equally well, and proper adaptive movements were executed. The hand grips were estimated to be normal. There was moderate lateral instability in both knees, with crepitation on motion. The lower extremities were hyperextensible at the hips. Sensory examination was not satisfactory. Withdrawal responses were obtained on application of noxious stimuli. The deep tendon reflexes were equal and active throughout. The plantar responses were flexion.

Laboratory studies: The hemoglobin was 14.5 gm. per 100 ml. The white blood count was 15,400 per cu. mm. The specific gravity of the urine was 1.008. The pH was 7.0. There was 3 plus albuminuria, and chemical tests for sugar and blood were negative. Microscopic examination of the urine revealed several hyalin casts and an occasional white blood cell per high power field. X-rays of the skull revealed enlargement of the sella turcica. Overgrowth of the facial bones was evident,

and there was extensive pneumatization of the frontal sinus. A chest x-ray revealed an increase in the bronchovascular markings in the right cardiophrenic angle. The heart was enlarged, and the configuration was of left ventricular hypertrophy.

Fluids were administered subcutaneously, and a wide spectrum of antibiotics was employed. Nasal oxygen was administered. Throughout the evening of admission, the patient's course became progressively worse. The respirations became labored and very rapid. The level of consciousness gradually ebbed. Eight hours after admission, the patient suddenly gasped, moved about in bed, became cyanotic, and developed stridulous respiration. Aspiration of the pharynx with a nasal catheter yielded a small amount of tenacious mucosa. Artificial respiration was performed manually and with a bag and mask, but the patient died.

CLINICAL DISCUSSION

Dr. Bernard I. Lewis, Medicine: The conference today is concerned with a rather infrequent but interesting and, at times, quite dramatic problem. I assume that most of you have read the protocol so that it will not be necessary for me to review the history in great detail. In essence, we have a 59-year-old trucker with a prolonged, slowly progressive history of peculiar coarse features and overgrowth of his skeleton, soft parts, and probably his internal organs. Certainly he had cardiomegaly and hepatomegaly, if we are to rely on the protocol. In addition, he had diabetes mellitus, and it is noted that his testes were atrophic. Despite all these, he was apparently getting along fairly well until five days before admission, when, subsequent to a supposed minor injury—a back strain—he developed a headache, became lethargic, and spiked a fever.

He was admitted to a local hospital because of these symptoms. Although not indicated in the protocol, a lumbar puncture was performed there; and, according to the patient's hospital chart, this revealed no cells, no evidence of gross blood, a normal protein content, but an elevation of pressure to 230 mm. of water. On admission here, the patient was somnolent and lethargic, appeared disoriented, had a pyrexia of 103.6 degrees, a tachycardia of 106 and a blood pressure of 150/90, and was hyperpneic and perhaps somewhat dyspneic. Neck resistance on anteflexion was demonstrated. There was some pupillary inequality, but the neurological examination was otherwise not revealing. The other pertinent findings were related to the pulmonary signs—the patient was breathing both rapidly and with some difficulty; he had bilateral basal rales, dullness, and wheezes; and he had some moist rales over the right middle lung area. He had a leukocytosis of 15,000; the specific gravity of his urine was 1.008; and he had 3 plus albumin, an occasional

white blood cell, and some hyalin casts. Apparently, a second lumbar puncture was not performed here, which is unfortunate. However, he did have some x-rays, and this might be an appropriate time to have Dr. Kerr tell us what they revealed.

Dr. H. Dabney Kerr, Radiology: The significant film on this case is the lateral of the skull, which shows an increase in the size of the sella turcica. Now, an increase in size of the sella turcica doesn't always mean an intrasellar tumor. The intrasellar tumors we commonly see are the basophilic, the chromophobic, and the acidophilic adenomas of the pituitary. The basophilic never, in our experience, gave an increase in the size of the sella. The acidophilic tumors give a definite increase in the size of the sella in about 50 per cent of the cases, whereas the chromophobic in almost every instance give sellar changes.

The sella in its A-P dimension has a maximum diameter of about 16 mm. Thus, as we see the sella projected on the lateral film, we have in this instance one which measures from 18 to 19 mm. Its depth is also increased slightly. There are other lesions which will give an increase in the size of the sella turcica. Some of these are parasellar lesions, and the increase of intracranial pressure with constant pulsation of the third ventricle down into the infundibulum of the pituitary will give an increase in the size of the sella also. On this film also you can see a great increase in the size of the frontal sinuses.

The other view, which is not very satisfactory technically and which I'll not show you, indicates also that the frontal sinuses are very large. This, in itself, gives us an impression that we are dealing with an intrasellar tumor of the acidophilic type, the type which is hormonally active and leads to acromegaly. So that from this film alone, we could give an impression of an intrasellar tumor of the acidophilic type with production of acromegaly. This type of tumor gives acromegaly only after the epiphyses are closed and the patient has gained his adulthood.

The other film is not particularly significant, but since it has been mentioned, I'll simply point out that this man had a definite increase in the size of his heart, with an accentuation of the left ventricular curve and, undoubtedly, a hypertrophy of the left ventricle and some dilatation of the aorta also. The lung fields, I feel sure, are not significant so far as any pathological processes are concerned. Thus our only impression here was that this patient had an acidophilic tumor of the pituitary with an increase in the size of the sella turcica and also an increase in the size of his paranasal sinuses.

Dr. Lewis: This bronchial vascular marking of the right cardiophrenic angle is not significant, in your opinion, Dr. Kerr?

Dr. Kerr: I think they are of no significance.

Dr. Lewis: Thank you. To return to the protocol,

it is evident that this patient followed a progressive downhill course in the hospital—a rapidly progressive course. Despite oxygen, fluids, and antibiotics, he became more dyspneic, lapsed into coma, then developed a sudden cyanosis and stridor, and died.

It seems to me that we have two problems to contend with here. First of all, the fundamental, slowly progressive metabolic derangement and, secondly, the basis of the acute train of events that led to the patient's hospitalization and subsequent death.

As Dr. Kerr has indicated, the x-ray findings are indicative of an acromegalic process which is confirmed by the patient's clinical appearance. The scanty description given in the protocol made that quite evident to everyone I am sure. These people present a dramatic and unusual appearance. There was a wrestler known as "The Angel" who was probably the best-known example of this syndrome in recent years. Those of you who remember him will be provided, in your minds' eyes, with a reasonable facsimile of our patient today.

Acromegaly is a relatively infrequent syndrome. It occurs most commonly in the third decade. There is a one-to-one sex ratio. The precipitating cause of the disease is unknown. Characteristically, there is present an acidophilic or eosinophilic adenoma of the anterior pituitary, although hyperplasia of these cells may result in the same consequences. The manifestations can be best considered in the light of two concurrent processes. First, the mechanical consequences of any intracranial, space-occupying lesion: increased intracranial pressure, headache, and visual symptoms, with the last most often a bitemporal hemianopsia, although occasionally a homonymous hemianopsia may occur. Unilateral or bilateral optic atrophy may develop as well. Skull x-ray generally reveals an enlargement of the sella turcica and erosion and destruction of the clinoid processes.

Second, and much more intriguing, are the widespread endocrine changes which result from this tumor or hyperplasia. As a result of the increase in number and function of the acidophilic cells, there is effected a tremendous overgrowth of the skeleton, soft parts, and viscera. The peripheral skeleton is most markedly involved. The skull is thickened; the supraorbital ridges are very prominent; the lower jaw enlarges and is prognathous in type. Because the epiphyses are already united, the enlargement of the bones of the extremities is of a transverse rather than longitudinal type. These bones are greatly thickened, widened, and made extremely heavy. As time goes on, osteoporotic changes tend to occur in the cancellous bones, and there usually develops a dorsal kyphosis, which is another characteristic feature of the disease. In addition to these direct effects of the eosinophilic cellular hyperfunction, other hormonal changes occur which are believed to result from irritation to the adjacent, actively-

secreting cells in the anterior pituitary. There is increased production of the thyroid-stimulating hormone. The presence of goiter is an extremely frequent finding in acromegaly, but frank hyperthyroidism is much less common. There is increased production of ACTH. The adrenal cortex is usually hypertrophied but, paradoxically, there are few clinical manifestations of increased adrenal cortical function, although possibly related changes such as hirsutism and a disturbance of carbohydrate metabolism are often present. The disturbances in carbohydrate metabolism are not clearly understood, as far as I am aware. The adrenocortical hyperfunction probably plays an important part, but the diabetogenic factors from the pituitary also appear to be involved. Be that as it may, hyperglycemia and glycosuria are common findings, whereas frank diabetes mellitus is somewhat less common, though still frequent. This type of diabetes is usually rather resistant and is not too easily controlled by our standard measures of diet and insulin therapy.

Gonadotrophic secretion is also affected, with an increased production of the gonadotrophins. Early in the disease there tends to be hypertrophy of the genitalia, most often affecting the male. There is also an increase in libido and potentia. In women, menstrual irregularities and amenorrhea frequently develop. As a result, presumably of pressure on the hypothalamus and pathways between the hypothalamus and posterior pituitary, the picture of diabetes insipidus may supervene. Polydipsia and polyuria develop, apparently unrelated to the presence of hyperglycemia and glycosuria. Polyphagia, somnolence, and thermal derangements may occur as well, as the result of encroachment upon the hypothalamus.

The illness is usually slowly progressive, and the course may extend from 5 to 30 or more years. With the passage of time, the manifestations of hypopituitarism gradually tend to supervene, in contrast to the hyperfunctioning state present early. This is thought to result from pressure atrophy of the adjacent cells in the pituitary. The common manifestations are progressive weakness, depression, and changes suggestive of hypothyroidism (such as cold sensitivity), an extremely low BMR, loss of hair, dry skin, decrease in sweating, and the like. Gonadal atrophy with a marked decrease in libido and potentia tend to occur at this stage as well, but rarely does there develop the cachetic picture of Simmonds' disease.

The hazards, complications, and causes of death are, in brief, intracranial extension of the tumor mass, hemorrhage, diabetes and its sequelae, congestive heart failure, and intercurrent infection. The differential diagnosis usually provides no significant problem and, in the interest of time, I will dispense with it.

Let us consider the second problem that this patient presented—the complications which led to his death. Their nature and course suggested two

things to me—first, that something acute had happened in the central nervous system and, second, that there was probably an acute infectious process, most likely in the respiratory tract. The only spinal fluid examination we have was performed at another hospital, and this revealed only a mild increase in pressure. As we must rely on the data available, this would tend to exclude a significant infection in the central nervous system. There was no evidence of diabetic acidosis, which must always be considered in problems of this nature. It is likely, therefore, that what happened here was an extension and/or hemorrhage involving the tumor mass with secondary encroachment upon vital centers in the brain. If hemorrhage was indeed present, one can speculate that it might have been precipitated by the strain which caused his back injury. However, this is sheer conjecture and cannot be substantiated. The fever might be explained in part by involvement of the hypothalamic region, but is likely to be related to the infectious process. The leukocytosis points toward an infection, and the pulmonary findings are suggestive of a pneumonitis and perhaps some degree of atelectasis.

I wondered for a moment whether this postulated pneumonitis might have been secondary to the aspiration and, in turn, a consequence of the central nervous system process. However, this is only a possibility, and perhaps we shall receive the answer later.

In conclusion, I suspect the cause of death here was the encroachment upon vital brain centers, aided and abetted by the toxic and septic factors secondary to the postulated pneumonia. I wonder if Dr. Meyers will tell us something about the complications in this condition from the point of view of the neurosurgeon, and also what he thinks might have been the cause of death.

Dr. H. Russell Meyers, Neurosurgery: Dr. Lewis has given us a very comprehensive survey of the pertinent diagnostic considerations. My remarks fall wholly within the framework of his discussion.

We are told that the clinical examination revealed a moderate nuchal rigidity. Can this statement be reconciled with the report that the cerebrospinal fluid was clear, colorless, and lacking in pleocytosis? Manifestly, it can, for meningeal irritation is but one among many pathologic factors that may produce a stiff neck. We recall such additional factors as systemic toxic myositis, sprain of the several soft tissues of the neck due to head trauma, and arthritis, spondylosis, and osteoarthritis of the cervical spine. Any one or a combination of these might have been present in the patient under consideration. All that we may safely deduce from the cerebrospinal fluid data is that viral, bacterial, and aseptic chemical agents (e.g., blood and blood pigments) probably had no free access to the cerebral subarachnoid spaces.

As to the 230 mm. H₂O pressure of cerebrospinal fluid, before concluding that this constitutes an intracranial hypertension in need of explanation, we should assure ourselves that the reading was made under proper conditions, namely the relaxation of the patient and no elevation of the head above the level of the recording needle. The protocol provides no assurance that these conditions were met. If, however, we could rely upon this datum, we should have to postulate a space-taking intracranial lesion of some sort.

To be sure, the clinical and roentgenographic evidence in our patient strongly indicates that he harbored a pituitary tumor, probably eosinophilic in type. But this sort of tumor, in and of itself, rarely produces intracranial hypertension. By far the majority of these tumors remain confined beneath the diaphragma sellae. Those that break down this barrier and enlarge sufficiently to produce a measurable intracranial hypertension almost inevitably produce "neighborhood signs," i.e., they compromise the functions of the second, third, fourth, fifth and sixth cranial nerves. We recall that no such signs were reported in the present case.

This should not, of course, be construed to mean that they could not have been present, and, surely, it does not exclude the possibility of "apoplexy" of a pituitary vessel *within the sella turcica*.

The signs and symptoms actually listed in the protocol, e.g., arterial hypertension, fever of 103.6 degrees F., bradycardia, hyperpnea, dyspnea, restlessness, confusion, disorientation, etc., are *non-specific* and generally characteristic of a number of acute systemic toxic and infectious processes. In themselves, they do not force us to conclude that their origin is within the cranium; they may occur in the absence, as well as in the presence, of a pituitary tumor and need not be at all related to the tumor. Furthermore, these signs are not usually characteristic of intracranial tumors, edema, and similar pathologic processes that act upon the hypothalamus. In consideration of conventional physiological teachings, one would certainly suppose them to be, but clinical neurological experience does not bear out such expectations. On the contrary, patients harboring craniopharyngiomas, pituitary tumors, meningiomas, chordomas, gliomas, etc., usually die by a process of slow depletion of vital functions, and not in consequence of gyrating overactivity of hypothalamic functions. The circumstances required for dramatic disturbance of hypothalamic functions are those of *relatively rapid action*, e.g., trauma. An apoplectic hemorrhage within the pituitary might indeed provide these conditions, but only if the tumor escapes well beyond the confines of the diaphragma sellae, and only if the mass is already of considerable magnitude. A few milliliters of blood would hardly meet these requirements.

Dr. Lewis: Do I understand you to mean that

you don't think that the expansion of the tumor in itself is sufficient to be lethal to this man?

Dr. Meyers: Yes, that is what I mean. In brief, the mere demonstration of a lesion at autopsy, however interesting from the pathologic standpoint, does not compel the conclusion that it was responsible for the train of events leading up to a patient's death. It might in some cases be a mere result of some occult, but potent, etiologic process, which leads to the death of the patient.

I am not much impressed by the magnitude of the hemorrhage demonstrated today within the confines of the sella turcica. I suspect that many patients with pituitary tumors have at one time or another minor apoplectic events within the sella that cause little or no clinical disturbance. In time, clots may become liquefied and appear at operation or autopsy as xanthochromic, cystic lesions. Again, we have in no sense ruled out in today's problem the various possibilities of systemic toxic-infectious processes mentioned earlier in the discussion. Failure to have identified such should not be viewed as equivalent to asserting they did not exist.

Dr. Lewis: Thank you, Dr. Meyers. I trust Dr. Stamler, who will present the postmortem findings, will provide us with the answer to some of the unsolved questions in this case.

Dr. Frederick W. Stamler, Pathology: There was an eosinophilic adenoma replacing the anterior lobe of the hypophysis, with extensive old and recent hemorrhage and necrosis of the tumor. The tumor was unusually well encapsulated, so that there was practically no hemorrhage beyond the confines of the tumor. It was rather a large tumor for a pituitary adenoma, being three centimeters in its greatest dimension. It bulged out of the enlarged pituitary fossa, but did not obviously encroach upon the adjacent structures to any great extent.

The body was of typical acromegalic type with generalized visceromegaly in addition to the skeletal changes which have been described. The organs, such as the lungs, heart, liver, spleen and kidneys were rather uniformly enlarged to roughly twice the normal size and weight.

The other endocrine abnormalities included a colloid goiter and atrophy of the testes and prostate. Adrenal changes were not striking, and pancreatic islet tissue was of normal distribution and exhibited the normal staining reactions.

Dr. Lewis: Did the lungs have anything abnormal to show, such as bronchopneumonia? Do you think the hemorrhage into the pituitary tumor was the cause of death?

Dr. Stamler: There was an early lobular pneumonia, involving principally the right lower lobe. I regard this as a terminal process, secondary to whatever brought on his comatose state progressing to death, but certainly not a primary cause of his difficulties.

In regard to his tumor, there was extensive



Figure 1. Encapsulated hemorrhagic pituitary tumor.

recent hemorrhage with necrosis of the tumor and surviving remnants of the anterior pituitary lobe, together with considerable swelling of the tumor capsule. I cannot say whether or not it was this that caused the patient's death, but I have nothing better to offer.

SUMMARY OF NECROPSY FINDINGS

The body was of typical acromegalic type with generalized visceromegaly in addition to the skeletal changes previously noted. The anterior pituitary lobe was replaced by an eosinophilic adenoma with extensive old and recent hemorrhage and necrosis. There was confluent necrotizing pneumonia, principally of the right lower lung lobe. Additional endocrine abnormalities included atrophy of the right testis and prostate and a colloid goiter of the thyroid gland. There was a moderate degree of generalized arteriosclerosis.

NECROPSY DIAGNOSIS

Acromegaly.

Eosinophilic adenoma, pituitary, with hemorrhage and necrosis.

Confluent necrotizing pneumonia, right lower lung lobe.

Colloid goiter, thyroid.

Atrophy, right testis and prostate.

Arteriosclerosis, moderate, generalized.

Dr. Lewis: We still don't know *why* this man died. Dr. Halmi has come over to tell us a little bit about his work with the hypothalamus and his hypothesis. Perhaps he will be able to shed a little light on the problem.

Dr. Nicholas S. Halmi, Anatomy: I am afraid I shall disappoint you. I have had very little personal experience with the problems of acromegaly.

Dr. Lewis attributed the hypersecretion of pituitary principles other than growth hormones, which may occur in acromegaly, to a stimulation of the pituitary remnant rather than to the tumor proper. This idea is very gratifying, since we have good evidence in rats that e.g. thyrotrophin is not secreted by the acidophils, and we would like to believe that there is something else in common

between human beings and rats than that they both are omnivorous and occasionally show signs of (more or less sublimated) cannibalistic tendencies.

There have been observations of elevated blood thyrotrophin levels in some acromegalic patients, but apparently more acromegalics show thyroid enlargement than hyperthyroidism.

As to the gonads, there may possibly be an initial stimulation by gonadotrophin, but eventually they tend to atrophy in this condition. This may be accounted for by a "crowding out" of pituitary gonadotrophic cells, which, in animals, again do not appear to belong to the acidophilic variety.

With regard to the adrenal, the postulation of an increased release of ACTH may not be necessary to explain the adrenal enlargement of acromegalics. Purified growth hormone (that is, "purified" by the criteria of the protein chemist, which are not necessarily those of the biologist) may bring about adrenal enlargement in experimental animals, but in these there is as little evidence of frank hyperadrenocorticism as there is in most acromegalics with hyperplastic adrenal cortices. In the present patient, indices of adrenal cortical function were not examined, but no adrenal enlargement was found at autopsy.

Although the view has been recently advanced that growth hormone is not identical with diabetogenic hormone, there appears to be more evidence in favor of the thesis that it is. Thus, it is not necessary to blame the adrenal for the fact that so many patients with acromegaly are diabetic. Attempts to produce acromegaly or a diabetic condition in human beings by the administration of growth hormone have so far not been successful. However, "heroic" doses were not given. (As you know, we call it a "heroic" experiment when we give very large doses—this makes a hero out of the doctor if he is successful, and a hero out of the patient in any event). Recently, Kinsell was able to aggravate the pre-existent diabetes of one patient by giving him growth hormone.

It is of interest that great species differences exist in the susceptibility of growth-hormone-induced derangements in carbohydrate metabolism. The rat is an animal which is remarkably immune. The dog and the cat, on the other hand, are vulnerable. Humans are more like rats in this respect.

Dr. Lewis: Thank you very much, Dr. Halmi. Time is getting short. I shall go right on to therapy now, and I shall ask Dr. Kerr to tell us about the therapeutic radiation measures that form the main form of treatment for this condition.

Dr. Kerr: I shall make my remarks as brief as possible in order to get over to you some of the things that we think about irradiation in regard to pituitary tumors. In general, I think it is considered, not only by radiologists but by a great many neurosurgeons, that the primary attack

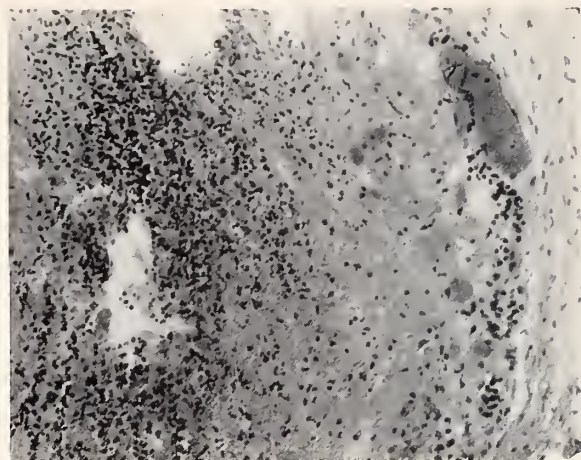


Figure 2. Photomicrograph of an eosinophilic adenoma of the pituitary gland, showing hemorrhage and necrosis. A narrow rim of anterior pituitary tissue is present at the periphery.

upon pituitary tumors of the chromophobic and acidophilic type must be by radiation. There are, however, those neurosurgeons who disagree with this point of view. Dr. Davidoff, of New York,* is in accord with this idea, unless there is a good chance of the patient's becoming blind during the interval when radiation is being given. In our work here we treat patients with pituitary adenoma all in one course, which has not been the usual method of treatment elsewhere. Previously, small doses were given every few months—doses from 1,200 to 1,500 delivered roentgens, and the results were not quite what we wished. Of course, the results are still not quite what we wish.

I think that we have probably reached a peak in what we can do. We give a single course of irradiation and try to deliver between 2,500 and 3,500 roentgens to the tumor itself. In about 70 per cent of the cases, there is good response. This good response is manifested by a complete regression of the symptoms, such as headache, an increase in the visual field cuts, and a restoration of the patient to relative normality.

What prevents good results in most of our unsuccessful cases is the fact that some of these tumors have cystic degeneration. Most, but not all, of these patients are found at operation to have cystic lesions. We think it is extremely important to follow these patients carefully with visual field studies and let them go not longer than two months following irradiation. At that time, if there is any indication that there is an increase in the visual field cut, the neurosurgeon should be called in immediately and his help asked.

Generally speaking, however, a good result from radiation in pituitary tumors is permanent. I know that Dr. Meyers has recently seen a case for us where the result was good, but later, symp-

(Continued on page 37)

* Dr. Leo Davidoff, Montefiore Hospital for Chronic Diseases, New York, New York.

The JOURNAL of the Iowa State Medical Society

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A.M.A. INTERIM SESSION

The physicians of Iowa were well represented and took an active part in the clinical sessions held in St. Louis in December. At the close of the editorial section of this month's JOURNAL is a résumé of the transactions of the House of Delegates. We urge that you pay particular attention to the resolution adopted concerning Blue Cross and Blue Shield.

HAPPY NEW YEAR!

Once more, the time has arrived for the JOURNAL to offer its readers our very best wishes for the coming year.

Your Society has been active the past year with problems which would appear to become more complex as time goes by. Particularly noteworthy have been the district mental-health workshops held in six centers throughout the state, for which the scientific programs were provided by the Society, in cooperation with the Division of Health Education of the Iowa State Department of Health. The efforts of the Society to sponsor the growth of Blue Cross-Blue Shield plans have been fruitful, but there are many difficulties remaining to be solved.

During 1953, the College of Medicine of the State University of Iowa was fortunate in obtaining the services of Dr. Norman B. Nelson as its new dean. His administration had an auspicious beginning, and we continue to wish him the utmost success. Under his guidance, our College of Medicine should not only do much for the physicians

of Iowa, but also should continue to occupy a prominent place among the medical schools of the nation.

The annual state meeting of the Society, to be held in Des Moines in April, 1954, already promises a program which will make your attendance well worth while.

We again bespeak your cooperation in forwarding the programs which your Society has undertaken. In unity there is strength, and we must continue to band together if we are to promote good medical care for all of the citizens of Iowa.

A NEW ERA

A challenging new book by Jensen, entitled *Modern Concepts in Medicine** describes in its first two chapters the development of medical-thought methodology. The author outlines the stages through which our thinking has passed. These stages are not, of course, air tight, for even today we use some of the early methods. For example, although the first era of superstition and magic is almost extinct, it has not altogether disappeared from our present scene.

Primitive man, lacking knowledge, demanded some explanation to satisfy his medical curiosity. He instituted the era of *speculative superstition*. Knowledge first came in 400 B.C. with Hippocrates, who documented facts through *simple observation*. Then came the dark ages, which halted progress until about 1500 A.D. Thereafter, observation became more complex, with the dissection of the human body. Vesalius produced his great book, *De Humani Corporis Fabrica*. About a century later came the era of the *physiologic experiment*, which was highlighted by the observations of Kepler, Galileo, Descartes, Bacon, and Harvey. With the nineteenth century came *classification of disease*, when doctors, culminating with Osler, began to think in terms of entities such as Bright's Disease, Addison's Disease and tuberculosis. The *surgical era* developed in the late nineteenth century and reached its zenith in the first half of the twentieth century with discovery of an amazing array of new technics. During these years also, the *statistical method* flourished, with reports from large institutions of hundreds and thousands of cases. All these methods are being used today, even though their zeniths have passed.

Today, scientists are beginning to study the *integrative processes* of the body, the "milieu interieur" of Bernard. The Selyes and the Kendalls are helping us realize that cancer of the stomach, arthritis and pneumonia are not only diseases of a certain part, but diseases of the whole organism as well. They are beginning to study the elusive electrolyte, the hormones, the regulatory mechanisms of the body and other biochemical phenom-

* *Modern Concepts of Medicine*, J. Jensen, (St. Louis, C. V. Mosby Co., 1953).

ena. Such terms as pyruvic acid, nucleic, and carbonic anhydrase are shunned by us of little knowledge as being of no import, but tomorrow such substances as these will be the building stones of medical thought. For it is through study of cellular, intercellular, and intracellular metabolism that we shall discover the answers to such great questions as the nature of aging, arteriosclerosis, cancer, and individual susceptibility.

We owe it to ourselves to attempt to achieve some familiarity with these obscure substances, for one day they will prove more fascinating than surgery, bacteriology, and clinical description of disease combined. We are at the dawn of a tremendously exciting new era, that of the discovery of the basic processes of disease!

TWO NEW YEAR'S RESOLUTIONS

Members of the medical profession have many demands made upon them, and it is a matter of public record that their response is almost always good. Yet, there are exceptions. Sitting in the House of Delegates at the St. Louis A.M.A. meeting, one heard a good deal about some of the special projects of physicians, among them the World Medical Association and the American Medical Education Foundation. For the fourth straight year, the A.M.A. has given half a million dollars to the American Medical Education Foundation, but the trustees warned that it would not be possible to continue yearly grants of that size much longer.

Industry is already providing many times as much money for the benefit of medical schools as is the medical profession. Every doctor knows that the tuition he paid for his medical training did not begin to cover the cost of that training. Medical schools have been aided by endowments, grants, gifts, and taxes in making available their teaching programs. As a result, the cost of our medical education was subsidized by someone other than ourselves.

Today the number of gifts has diminished because of high taxes; the interest on endowments not only is probably less than it was even ten years ago, but, as costs increase, its fixed dollar buys less and less. Medical schools have found it difficult to maintain their high standards with current income.

Adopting the philosophy that physicians whose medical education was subsidized now owe a moral debt to assist in training the oncoming generations, the A.M.A. set up its Foundation in 1950. Here in Iowa the delegates of the county medical societies were made responsible for soliciting support for the fund.

Our record of contributions is not too good. Some physicians have given each year and deserve our thanks. Some, however, have failed to respond to the cause. Let us, as we enter the New

Year, examine the record and make sure we have done our part.

The World Medical Association is another organization which belongs to practicing physicians the world over. It has much to its credit in the creation of closer ties between physicians of freedom-loving countries. In 1948 it enunciated a modification of the Hippocratic Oath known as the Declaration of Geneva, as a direct outgrowth of a study of the German war crimes. A natural sequence was the adoption of the International Code of Medical Ethics, which has been approved by the American Medical Association.

Since many of the participating physicians live in countries that lack sufficient funds to finance the activities of the Association, the United States Committee has stepped into the breach. Every physician is welcome to membership, and, further, his support is needed. Yearly dues are \$10. If sent to the State Society office, they will be forwarded.

This is another worthy project of the medical profession which merits each physician's consideration. We hope the New Year will see an increase in the Iowa members of the World Medical Association.

NEW IMMUNIZATION PRODUCTS

Two new products for immunization simultaneously against diphtheria, whooping cough and tetanus have been announced by the Eli Lilly Company. They are "Tridipigen, Alum Precipitated," which is particularly recommended when immunization is begun before the age of six months, and "Tridipigen, Fluid," for general use. Both products are suspensions of killed hemophilus pertussis organisms together with purified diphtheria and tetanus toxoids in physiological saline solution. Thimerosal, 1:10,000 is added as a preservative.

The pertussis element in these compounds is standardized by the new National Institute of Health method, which prescribes that the total immunizing dose shall contain twelve NIH protective antigenic units, the equal in antigenicity (not count) of between 90 billion and 96 billion NIH Reference Standard hemophilus pertussis organisms. The new method of standardization has been introduced to put dosages on the basis of antigenicity rather than of bacterial count and to facilitate the maximum immunological response from the minimum dose of bacteria.

OBSTETRICS & GYNECOLOGY CONFERENCE

The Department of Obstetrics and Gynecology of the College of Medicine at S.U.I. is planning to have a post-graduate conference on March 5 and 6, 1954. Programs will be mailed to physicians.



NATHANIEL GRAHAM ALCOCK, M.D.

The membership of the Iowa State Medical Society is saddened to learn of the death, on December 10, 1953, of Dr. Nathaniel Graham Alcock, 72, one of its past-presidents (1950) and professor emeritus of urology at the College of Medicine of the State University of Iowa.

He died of heart disease, after an illness of about eight months, at Mercy Hospital, in Iowa City.

In the April, 1950, issue of the *JOURNAL* of the Iowa State Medical Society, a special committee named by the Executive Committee of the College of Medicine said: "The pioneering work of Dr. Alcock in the development of transurethral surgery was probably the outstanding development in urological surgery for the period 1930 to 1940. It brought comfort and long life to thousands of patients in Iowa and elsewhere who were suffering from prostatic disease. Urologists from all over the world were attracted to the department.

"Dr. Alcock's qualities as a teacher are equal to his abilities as a clinician. His lectures and his bedside teaching are second to none. The department of urology taught not only the medical students, the interns and the residents and visitors at the department, but also every doctor whose patient came under his care."

Dr. Alcock was a native of Wisconsin and received his entire collegiate training, academic as well as medical, at Northwestern University. After interning at Alexian Brothers Hospital, in Chicago, and practicing eighteen months at Pueblo, Colorado, he came to the State University of Iowa as an instructor in 1915. After he retired from full-time duty on the faculty of the University, in October, 1949, he continued to teach some classes, and he engaged in private practice as chief of urology at Mercy Hospital, Iowa City.

Friends wishing to share in perpetuating his memory are invited to contribute to a fund that is being established in his name at that hospital.

HIGHLIGHTS OF A.M.A. INTERIM SESSION

The 1953 Interim Session of the American Medical Association which was held in St. Louis, Missouri, December 1-4, attracted approximately 2,700 physicians and about an equal number of guests.

This report is limited to business of the House of Delegates, the policy-making body of the American Medical Association. One hundred seventy-eight delegates were seated in the House at this session. Iowa was represented in the House by Drs. George Braunlich, Davenport; D. C. Conzett, Dubuque; and D. F. Ward, Dubuque. Dr. Ward was seated in the absence of Dr. G. V. Caughlan who was unable to attend. Dr. Gordon Harkness of Davenport was seated in the House as the delegate representing the section on laryngology, otology and rhinology.

GENERAL PRACTITIONER OF THE YEAR

The first day of business of the 3-day session was devoted to the election of the General Practitioner of the Year, the address of the president, committee reports, and the introduction of resolutions under new business. Dr. Joseph I. Greenwell of New Haven, Kentucky, was named General Practitioner of the Year. The award was announced by Dr. Dwight H. Murray of Napa, California, Chairman, Board of Trustees, American Medical Association, following the selection of Dr. Greenwell by a special three-man committee of the Board which studied nominations from State Medical Societies. Iowa did not have a candidate who was considered for this award. Dr. Pierre Sartor of Titonka, who was Iowa's outstanding general practitioner for the year, asked that his name not be submitted. Dr. Greenwell is 80 years of age, a native of Kentucky who has practiced in Nelson, Hardin, LaRue, and Marion counties since receiving his M.D. degree from the Louisville Hospital College of Medicine in 1900. He has delivered almost 4,300 babies, more than 80 of them this year. He has been active throughout his career in scientific, professional, and community affairs. He was mayor of New Haven for 14 years and a member of the town's Board of Trustees for 25 years. Dr. Greenwell has been acting health officer for the past 8 years. Dr. Greenwell's two sons, Richard and Nicholas, were present at the time their father received this high award.

PRESIDENT'S P.R. PLAN

Dr. Edward J. McCormick, in his Presidential address, gave a progress report of the nine-point medical care program which he outlined before the House of Delegates in New York last June. This program follows:

1. "Placement services are now in existence in 37 states. Of these, 32 are operated by medical societies. It is important to the future of medicine that every community have access to a physician. Medicine must actively aid those communities

which are trying to attract doctors by building modern facilities for them.

2. "Over 600 of our county medical societies now have 24-hour emergency call services. I urge all others to support such a system.

3. "Every medical society must have a strong and fearless mediation committee to hear patients' complaints. These must not be whitewash committees.

4. "Physician and hospital relationships must be clarified and steps taken toward mutual co-operation. I advise the formation of physician-hospital committees by state and county medical societies to work toward better relations in local communities.

5. "Every county society should become an active unit in the nationwide effort to develop and expand voluntary health insurance.

6. "Too many physicians have been isolationists within their communities. Local societies should encourage each individual member to participate in some civic undertaking.

7. "Every doctor must be brought to realize that public relations begins in his or her office—that the way in which they treat patients reflects for good or ill on the entire profession.

8. "All county and state societies should make continued efforts to develop a close association with writers for press, radio and television.

9. "There is a need for unity within the profession. I have noticed a distressing regression toward petty internal wrangling, charges and countercharges and divisive activities by various groups within the profession."

Dr. McCormick stated that in his travels throughout the country he had gained the impression that considerable progress has been made in adopting the programs which he had outlined last June. He stated that even though there is evidence of progress, we still have a long way to go in improving the public's attitude toward the medical profession. He urged the delegates to return home and campaign for stronger Grievance Committees which would have the power to expel the members of the medical profession who violate the code of medical ethics. In his opinion, good public relations cannot be bought—they must be earned. Each physician must assure good medical service if we are to have a successful public relations program, he said.

Referring to recent national publicity, Dr. McCormick stated that he is entirely opposed to a national program of publicity that results from the sins of a few, but smears all physicians. He believes public relations is a grass-roots problem and that P.R. should have its beginning between each individual physician and each patient. The president spoke of the expansion of voluntary health insurance but called for more attention to the problem of covering catastrophic illnesses and care of the aged. In speaking of the medical-economic problems, the president stated that in

the last six months he had observed little evidence of change in the socialistic trend and government intrusion into the business affairs of the people. If we are to survive as a democracy, we, as doctors and community leaders, must request that all join together under a code of ethics as high in principle as the code of medical ethics of the American Medical Association. He believes journalists, laborers, industrialists, and others might well consider a code of ethics comparable to the code under which the organization of medicine operates. He believes that others must do more to improve housing and sanitation, and put forth greater effort to eliminate gangsterism, juvenile delinquency, socialism, and communism.

The president said that no other groups have given the time and effort to public service that has been devoted by the councils and committees of the American Medical Association. He asked that the delegates attempt to inform their colleagues of the work of the committees and officers of the American Medical Association. Dr. McCormick said that a great number of our members know of the scientific achievements of the American Medical Association, but know little of the other very important activities. He recommends that each physician read the organizational section of J.A.M.A. to inform himself of the aims and purposes of medicine. He asks that medical educators devote a certain part of their time to the teaching of medical ethics. Continuing, he said it is up to medical educators to graduate physicians immune to socialism and communism.

As President of the A.M.A., Dr. McCormick said, "I give you my pledge to carry your thinking throughout the nation. I hope in San Francisco I shall be able to report added progress in public relations. It is medicine's responsibility to provide the best medical care to all of the people of our land and to oppose any and all movements which might jeopardize this objective. We must all devote time to preserving our country as a democracy.

IOWA'S RESOLUTION ON JOINT BILLING

The various committee reports were presented for approval of the House of Delegates and were followed by the introduction of resolutions under the heading of new business. Thirty-four resolutions on a variety of subjects were presented for consideration of the house. Each of these was referred to a reference committee for consideration.

The resolution sponsored by Iowa was the second resolution presented to the House of Delegates. It was referred to the reference committee on miscellaneous business, and on Wednesday most of the Iowa delegates sat in the meeting of that committee in order to participate in the discussion of it. The physicians from Iowa who participated were Dr. R. N. Larimer, president; Dr. Wendell L. Downing, trustee; Dr. Donovan F. Ward, alternate delegate; and Dr. F. C. Coleman,

chairman of the legislative committee. Dr. George Braunlich, who was the introducer of the resolution, served as the spokesman for Iowa in presenting it to the House as well as to the reference committee.

The reference committee, in its report Thursday before the House of Delegates, recommended that the Iowa resolution be referred to the Judicial Council of the American Medical Association for investigation of the factors involved in the matter as presented and for determination whether there are new factors or new facets that would cause it to change the opinion rendered in 1952. The Judicial Council was asked to report its ruling at the June 1954 annual meeting. The recommendation of the reference committee was approved by the House of Delegates.

Earlier in the day, the reference committee on constitution and by-laws gave its report, which included a request from the Council on Constitution and By-Laws that a survey be made to determine billing procedures that are approved in various sections of the nation. According to the report, the Council believes that the nature of this subject is so vital that any action taken by the House of Delegates should clearly reflect the prevailing opinions of constituent associations. Accordingly, the Council proposes to conduct a questionnaire survey of the constituent state associations to determine their official policies on this matter, after which it will report its findings to the House of Delegates. This recommendation of the Council and the reference committee on constitution and by-laws was approved by the House of Delegates. The information which is accumulated by this questionnaire will undoubtedly have a bearing on the ruling which is made by the Judicial Council on the Iowa resolution.

OTHER RESOLUTIONS

The House of Delegates approved an emergency resolution which was introduced Thursday morning by the Council on Medical Service condemning all insurance contracts which classify any medical service as a hospital service. The resolution follows:

"Whereas, Health Service, Inc., a capital stock casualty insurance company reported to be wholly owned by the Blue Cross Commission of the American Hospital Association, has issued insurance contracts to employees of the meat packing industry and their dependents in violation of the principles established by the American Medical Association; and

"Whereas, Health Service, Inc., and other insurers may issue other similar contracts; and

"Whereas, the issuance of these contracts is evidence of continued disregard of the principles as set forth by the House of Delegates of the American Medical Association which principles define pathology, radiology, anesthesiology, and psychiatry as medical services; and

"Whereas, this continued disregard becomes even more disturbing in view of the fact that Medical Indemnity of America, Inc., an insurance company said to be owned and controlled by Blue Shield Medical Care Plans, Inc., and Health Service, Inc., are operated under an agreement whereby each insurer assumes half of the risk underwritten by the other; and

"Whereas, the American Medical Association is concerned with all branches of medicine as they relate to the health of American citizens and recognizes that insurance plans of this type will result in lowering the quality of medical care; therefore be it

"Resolved, That the American Medical Association condemns all insurance contracts which classify any medical service as a hospital service; and be it further

"Resolved, That the House of Delegates in session on December 3, 1953, reaffirms all past actions of the House of Delegates relating to the subject."

The House of Delegates approved the supplementary report of the Council on Medical Service on Veterans' Medical Care. The report recommends that grass-roots activity be increased so as more completely to inform the profession on the policy statement on medical care for veterans with non-service-connected disabilities which was adopted by the House in June, 1953. The Council was directed to continue regional conferences held for discussing the A.M.A. policy on Veterans' Medical Care. Four regional conferences have been held. The Council was authorized to develop liaison, through its Committee on Federal Medical Services, with national and local organizations interested in and concerned with veterans' medical care.

The House approved a resolution introduced by the Oregon State Medical Society which requests the Council on Medical Service to conduct a special study of two problems in the prepaid medical care field, namely: (a) coverage for those individuals who suffer catastrophic or long-continued and highly expensive illnesses and whose financial resources are not adequate to meet the cost thereof, and (b) those citizens who have retired and are living on small incomes and who are not eligible under presently existing public or private plans. These findings and recommendations of the Council on Medical Service are to be published in some convenient form and made available not only to the medical profession, but also to non-medical groups or individuals working in the field of prepaid medical care.

The House approved a resolution requesting the Joint Commission on Accreditation of Hospitals to publish an article, or series of articles, in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, and other official publications circulating among the medical and hospital professions, to acquaint the medical-hospital profession with the regulations, by-laws and their interpretations.

ADVERSE PUBLICITY TO BE STUDIED

The House of Delegates adopted a resolution calling upon the Board of Trustees to appoint "a special committee with broad representation throughout the profession" to study all aspects of the problems created during the past several months by adverse publicity.

This action was taken after a reference committee studied a resolution introduced by Dr. John F. Burton of Oklahoma City, Oklahoma, which said that "published statements of certain medical spokesmen concerning alleged unethical practices of members of the medical profession have tended to destroy the confidence of patients in their physicians."

The Reference Committee in its report "approved the intent" of the resolution and referred it to the Board of Trustees for further study and implementation. The Board was asked to report its findings and submit its recommendation to the house at the A.M.A. meeting in San Francisco next June.

FEDERAL LEGISLATION

Following the recommendation of the Reference Committee on Legislation and Public Relations, the House of Delegates reaffirmed its opposition to the compulsory coverage of physicians under the Old Age and Survivors Insurance provisions of the Social Security Act. The reference committee approved a resolution advocating the passage of the Jenkins-Keogh Bills (H.R. 10 and H.R. 11, 83rd Congress) now pending, which would provide for "the development of a voluntary pension program which is equitable, free from compulsion, and satisfies the retirement needs of physicians." The House of Delegates urged continued support of S. J. Resolution Number 1 (The Bricker Amendment). The A.M.A. supports legislation which would permit increased deductions from income taxes for medical and dental expenses. The House approved the continuance of regional legislative conferences under the sponsorship of the Washington office.

ARE P.R. MATERIALS USED?

The reference committee on legislation and public relations and the House of Delegates approved the report of the A.M.A. Public Relations Department. The reference committee commended the staff members for their performance and pointed to specific activities which they believed deserving of comment. They approved the annual Public Relations Conferences, but urged greater attendance by physicians. The committee and House endorsed the press, radio and television activities of the department. The committee believes the department has done excellent work in the preparation of literature, but is anxious to know to what extent it is being used by physicians. The committee asked the Board of Trustees to make an

attempt to measure the effectiveness of A.M.A. literature.

PRINCIPLES OF ETHICS REVISED

The House approved a revision of the section of the Principles of Medical Ethics which concerns the relationship of physicians to all forms of public information media—the press, radio, and television. It changes the title of Section 5 from "Educational Information Not Advertising," to "The Relationship of the Physician to Media of Public Information." It sanctions a physician's providing appropriate information and expressing his opinion regarding important medical and public health matters which have been discussed during open medical meetings or in technical papers which have been published, and approves his revealing information regarding a patient's physical condition if the patient has given his permission.

It recommends the appointment by each component or constituent society of spokesmen, whose guidance the other member physicians may seek whenever there is doubt about what should be told the press. Spokesmen should be empowered to give prompt and authoritative replies and a list should be issued which identifies them and discloses the manner in which they may be reached.

In this report we have attempted to touch on the subjects which seem to be of greatest current interest. The full proceedings of the House of Delegates will appear in an early edition of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

THE MONTH IN WASHINGTON

The following is the first installment of what henceforth will be a regular feature of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY. The Washington Office of the A.M.A. is undertaking to provide this summary each month to each of the state medical society publications.

The second session of the 83rd Congress is getting down to its task under conditions that could mean passage of considerable legislation of importance to medicine. What will be done depends on an administration whose control over Congress is tenuous and a Congress looking forward to the fall, when all members of the House and one third of the Senate must be elected or reelected. As is the case every two years, most lawmakers will be listening closely to what's being said back home.

Awaiting congressional action is the administration's plan for extending the social security system to bring more than 10,000,000 additional persons, including physicians, under Old Age and Survivors Insurance (OASI). This legislation is known to have less support in the House Ways and Means Committee, where it is being handled, than it has in the Executive Branch.

American Medical Association, with the support

of dentists, lawyers, farmers, and many other groups of self-employed, has consistently opposed this extension of OASI. The question now is whether this opposition will be articulate enough to convince Congress.

In place of social security for physicians, the A.M.A. for several years has actively promoted legislation identified first as Reed-Keogh, then as Jenkins-Keogh, named for the sponsoring congressmen. This would allow physicians and other self-employed people to defer income tax payments on a portion of their income, placed in restricted pension funds, obtainable in the form of benefits only in case of disability or at the specified retirement age. In this effort the physicians again are joined by a large group of associations representing the self-employed.

Other possible amendments to the social security law involve total and permanent disability payments and waiver of OASI premiums for the disabled, so their final pensions won't be reduced because of periods when they had little or no income. In each of these, medical determinations would be required. In the past, these bills have threatened an expansion of the federal medical program, have laid out an unreasonable role for the physician, or have called for compulsory rehabilitation. While not opposed to the objectives, A.M.A. has urged that both the patient and the physician be protected. In place of waiver of premium, the A.M.A. proposes that pension rates be based on the 10 best earning years, thus obviating the need for medical determinations.

As in other sessions, Congress this year probably will be asked to pass legislation providing free hospitalization under OASI for all persons past 65 covered by OASI, and for other beneficiaries of the program. In other years Congress has not taken this idea seriously.

The veterans' program is certain to provoke action. Last November, the Veterans Administration amended its forms to require more financial information from veterans who state that they cannot afford private care when they apply for hospitalization of non-service-connected disabilities. Congress may want further to clarify the government's obligation to veterans. It is expected also that special effort will be made to expand medical benefits for veterans by such methods as increasing the periods during which certain diseases may be presumed to be of service origin.

A.M.A.'s position on the care of non-service-connected cases is well known. It consists of three points. First, the best possible care by VA for actual service-connected cases. Second—until local and state facilities are adequate—VA care for long-term tuberculosis and neurological cases when the veteran himself can't pay. Third, all other non-service connected cases to be the responsibility of the veteran himself, his family, or his community.

The Defense Department has served notice that this session it will press hard for implementation of the Moulton Commission's recommendations for broadening the medical care program for military dependents. The Commission favored caring for as many dependents as possible at military installations, with the others receiving private care and the federal government paying all but a token of the cost. At its December meeting, the A.M.A.'s House of Delegates proposed that in this country the military provide medical care for dependents only where private facilities are not adequate.

Also up for decision this year is a Defense Department proposal that the federal government furnish medical, dental and nursing scholarships, with the recipients obligated for government service at the rate of one year for every year of the scholarship.

There is a strong possibility of pressure to enact a program under which the federal government would in one way or another subsidize private health insurance plans. The idea is known to interest Rep. Charles Wolverton (R., N.J.), chairman of the House Interstate and Foreign Commerce Committee, which last fall conducted a series of hearings on health matters. Senators Ives (R., N.Y.) and Flanders (R., Vt.) are offering a bill along the same lines in the Senate.

The controversial Bricker resolution holds over from the last session, and may receive early consideration in the Senate. Senator Bricker believes that Congress should have some check on the President's treaty-making powers. The American Medical Association repeatedly has indorsed the Bricker resolution as a safeguard against the introduction into this country by treaty of government-controlled medical plans without Congress's having a chance to pass on them.

Awaited with interest in Washington are the findings of two commissions appointed last year to look into the relationships between the federal government on the one hand and state and local governments on the other, and to investigate operations of the executive branch. The former is headed by Clarence Manion and the latter by former President Hoover. The Hoover Commission has until next year to make its report. The Manion Commission was instructed to have a report ready by March, but it may ask for more time.

CARDIAC SYMPOSIUM

The Department of Internal Medicine of Iowa Methodist Hospital, Des Moines, is sponsoring a cardiovascular symposium on Saturday, February 20, with a clinic on the following morning. The general subject will be "Surgical Types of Heart Diseases."

Speakers coming from various medical centers will emphasize specific aspects of the diagnosis and selection of patients for surgery.

MINUTES OF MEETINGS OF STATE SOCIETY OFFICERS AND COMMITTEES

BOARD OF TRUSTEES

November 5, 1953

The Board of Trustees met in the central office Thursday morning, November 5, 1953, with the following persons present: Doctors L. A. Coffin, J. W. Billingsley, W. L. Downing, C. A. Boice, A. B. Phillips, R. D. Bernard, and Mr. Donald L. Taylor and Miss Mary L. McCord.

Minutes were read and approved; bills were authorized; the JOURNAL contract for 1954 was awarded to the Ovid Bell Press; and a vote of appreciation was given to Don Taylor for his work on the Conference of Presidents and Secretaries.

Dr. Fred Sternagel discussed a manual of health resources which is being prepared for distribution to all members and the board let the contract for printing it to Associated Lithographers, of Des Moines. Reports were given by Miss McCord, Dr. Bernard and Don Taylor; the report of the Grievance Committee was read; resignation of Dr. Morton as Councilor was accepted with regret; and the meeting adjourned at 3:00 p.m.

COUNCIL

November 19, 1953

The Council met in the central office Thursday morning, November 19, 1953, with the following persons present: Doctors A. F. Fritchen, C. O. Adams, E. M. Kersten, O. D. Wolfe, E. F. Van Epps, C. A. Boice, E. B. Howell, I. K. Sayre, Oscar Alden, R. D. Bernard, and Mr. Taylor and Miss McCord. For a time, Mr. I. W. Myers and Mr. W. H. Sherin were present.

The meeting was called to order at 10:00 a.m., and minutes were approved as distributed. Attendance at meetings was discussed, and it was voted that the chairman of the Council should be given authority to request the resignation of any councilor who does not show enough interest in the work to attend regularly scheduled meetings or who fails to do the organization work in his district. It also asked Mr. Myers to prepare a set of rules for its guidance when it sits as a Judicial Council.

It discussed the Joint Commission for the Accreditation of Hospitals; membership problems raised by the temporary licenses given to residents; osteopathic problems in various parts of the state; and the new contract for hospital and medical benefits signed by the Rath Packing Company. Mr. Sherin explained the situation, and the Council discussed the matter at length. Dr. Bernard mentioned the need for more preceptors, and after choosing January 21 as the date for the next meeting, the Council adjourned at 4:30 p.m.

COMMITTEE ON PUBLIC RELATIONS

November 25, 1953

The Committee on Public Relations met in the Central office Wednesday morning, November 25, 1953, with the following persons present: Doctors O. N. Glesne, R. E. Smiley, E. H. Files, T. D. Throckmorton, W. M. Sproul and R. D. Bernard, and Mr. Don Taylor and Miss McCord. The Committee considered a statement of ethics for the relations between industrial physicians and family physicians, discussed making a poll on Iowa opinion relative to the medical profession and decided to ask the trustees to approve the idea; endorsed average county fee schedules and asked each county to make one; urged use of the plaque inviting the patient to discuss fees with his physician; endorsed the use of itemized bills; and voted to ask the trustees to permit an indoctrination meeting for new physicians. The meeting adjourned at 3:30 p.m.

COMMITTEE ON MENTAL HEALTH

December 5, 1953

The Committee on Mental Health met in the central office Saturday morning, December 5, 1953, with all members present. Dr. Bernard and Miss McCord were also in attendance. The Committee discussed how it might assist the Iowa Society for Mental Health; what is being done for retarded children; the limitations of the Iowa Mental Health Authority; and the situation at the mental hospitals. It voted to provide consultation service for the mental hospitals and to aid the Iowa Society for Mental Health. The meeting adjourned at twelve noon.

OSTEOPATHIC COMMITTEE

December 10, 1953

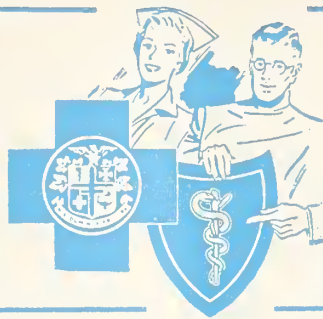
The Osteopathic Committee met in the central office Thursday morning, December 10, 1953, with the following persons present: Doctors J. D. Conner, J. J. Shurts, J. M. Rhodes, T. E. Shea (committee members); C. D. Ellyson, E. G. Zimmerer and R. D. Bernard. Miss McCord was present for the entire meeting and Mr. I. W. Myers for the afternoon session.

Dr. Zimmerer answered questions of the committee regarding his responsibilities in the State Department of Health and as a member of a committee of the USPHS.

The Cline report was discussed a length, and the committee finally voted to send a questionnaire to all members of the Society to determine their attitude on the report and its recommendations.

The meeting adjourned at 3:30 p.m.

BLUE CROSS



BLUE SHIELD

HEALTH SERVICE, INC., AND MEDICAL INDEMNITY OF AMERICA, INC.

There have been numerous inquiries recently about the organization and operation of the two insurance companies, Health Service, Inc., and Medical Indemnity of America, Inc., and their association with the Blue Cross and Blue Shield Plans. The doctors of Iowa should be informed of the nature of the companies and the scope of their operations.

Health Service, Inc., is a stock insurance company authorized to write health and accident insurance and incorporated under the laws of Illinois. The capital stock is wholly owned by Blue Cross Association, except for directors' qualifying shares. The financing of the company was made possible by contributions from the various Blue Cross Plans, and the member plans elect 10 of the 15 directors of Health Service, Inc. The other 5 members are elected by the Blue Cross Association.

Medical Indemnity of America, Inc., is a stock insurance company authorized to write health and accident insurance and incorporated under the laws of Ohio. The capital stock is wholly owned by Blue Shield Medical Care Plans. Individual Blue Shield plans made contributions to Blue Shield Medical Care Plans, which in turn purchased all of the capital stock of Medical Indemnity of America, Inc. The board of directors is elected by the contributing plans and has a membership of 15, of whom 8 are doctors of medicine.

The two insurance companies were organized to serve as a national enrollment agency for the Blue Shield-Blue Cross plans when an employer wished to provide uniform benefits and uniform rates for employees served by two or more plans in different areas. For many years, the employer negotiated contracts with each Blue Shield-Blue Cross plan, and substantial numbers of the membership in most plans belonged to employee groups engaged in operations in several states or nationwide. To preserve this coverage in the plans, Blue Cross and Blue Shield had to find an answer to the desire for uniform benefits and rates. The insurance company was to negotiate this contract and then apportion to the local plan that amount of the contract which the local plan could insure and service through its existing contracts. Any excess of benefits which could not be

handled by the local plan would remain the risk of the insurance company. Either Health Service, Inc., or Medical Indemnity of America, Inc., could be the original insuring company, depending on the state in which the employer negotiated the contract.

As of August 1, 1953, a joint operating agreement was negotiated between Health Service, Inc., and Medical Indemnity of America, Inc., which provided a means to coordinate and avoid duplication of their activities. This agreement provides for issuance of an "Approved Contract" providing Blue Shield benefits or Blue Cross benefits or both. The Blue Shield benefits to be included in an approved contract shall in all instances be fixed by Medical Indemnity. Likewise the Blue Cross benefits are to be fixed by Health Service. The form of each approved contract shall be subject to the approval of the governing board of each company.

The joint operating agreement defines "Blue Shield Benefits" as payment for professional service of a physician, licensed to practice medicine and surgery, for which the physician bills.

The widely discussed "Packing Industry Contract" was negotiated between the packing industry and the national unions before the joint operating agreement was in effect, for the quotations were given to the packing industry well before August 1, 1953. The coverage offered in this contract was such that your Iowa Blue Shield Plan could not participate in the medical-surgical benefits requested by the packing industry. As a result, in so far as the employee members in Iowa are concerned, the medical-surgical benefits are being carried directly by Medical Indemnity of America as an insurance indemnity program. The individual doctor's position is no different from what it would be if the coverage were issued by any other insurance company, writing group medical-surgical coverage, and the full service provision of the Iowa Blue Shield plan does not apply. The doctors, however, will submit claims for services directly to Medical Indemnity of America, Inc., on its forms and to its office at 35 East Wacker Drive, Chicago 1, Illinois. It is the intention of Medical Indemnity to pay the doctor directly if he has not been paid by the insured.

General Manager's Page

The Trustees have graciously accepted my resignation, effective as of January 1, 1954.

I feel that the objectives as outlined in my contract have been attained. The help that I have received from the membership, the Board of Trustees and the officers of the Society has been of inestimable value to me. I deeply appreciate that cooperation and extend to you my sincere thanks.

The Trustees have made the following reassignments of titles and responsibilities: Miss Mary McCord will be Assistant to the President and advisor to the various committees. She will also be Business Manager of the Journal and will have charge of the Physician Placement Bureau. Mr. Don Taylor assumes the office of Executive Secretary and will be in charge of the television programs.

My twenty years of activity in the State Medical Society have been a rewarding and wonderful experience. I hope that I have made some contribution to its success.

R. D. Bernard, M.D.

General Manager

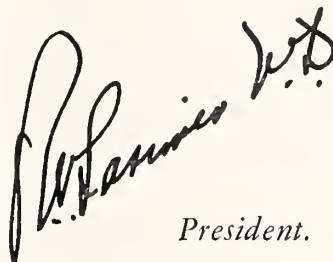
President's Page

Before this letter is printed, the state office will have mailed you a synopsis of the Interim Meeting of the A.M.A. which was held in St. Louis during the first week in December. That synopsis is reprinted in this issue of the JOURNAL. We recommend again, as we did after the New York meeting, that in addition to reading the synopsis, you read the official report of the meeting in the issues of J.A.M.A. There are many important changes in national medical policies that will affect the practice of every doctor, whether he agrees with them or not, and it is only by reading the minutes of the meeting that you can keep yourself abreast of these changes.

Among the significant problems which were discussed were the future stand of the A.M.A. in regard to veterans' care, the relation of the National Blue Cross to state Blue Cross and Blue Shield groups, on hospital accreditation, on intern training and on other matters.

The Iowa plan for the combined billing of fees was incorporated in a resolution presented by Dr. Braunlich. At least two reference committees were concerned with the Iowa plan, but the matter was considered important enough for the Committee on Constitution and By-Laws to recommend that a questionnaire be sent to every state society for advice, and it was stated further that the problem was too big for the delegates to act upon without further study. The stand of the Iowa delegates continues to be in favor of the Iowa plan.

You have received a second Public Relations manual from A.M.A. headquarters. It has been emphasized that national programs in Public Relations actually begin in the individual doctor's office, and the A.M.A. manuals are important guides that each of us should use. They are worth our study.

A handwritten signature in dark ink, appearing to read "J. W. Harrison", with a stylized flourish to the right.

President.

Iowa Academy of General Practice

President—Paul F. Chesnut, M.D., Winterset

President-Elect—Frank D. McCarthy, M.D., Sioux City

Vice-President—Dean C. Snyder, M.D., DeWitt

Secretary-Treasurer—William M. Sproul, M.D., 912 Equitable Bldg., Des Moines

Executive Secretary—Mrs. Elizabeth Nelson, 3600 Franklin, Des Moines

PROGRAM POSTGRADUATE MEETING

Thursday, January 21, 1954
Hotel Savery, Des Moines

James A. Clifton, M.D., Department of Internal Medicine, University of Iowa

1. Physiology of the Liver as it Pertains to the Recognition of Hepatic Diseases.
2. Commonly Used Liver Function Tests.
3. Recognition of Severely Altered Hepatic Function.
4. The Urine as a Liver Function Test.

Dan W. Myers, M.D., Department of Internal Medicine, Wayne University, Detroit, Michigan

1. Differential Diagnosis of Chronic Diseases of the Chest.
2. Newer Methods of Therapy in Chest Diseases.

BRING YOUR LADIES

We "missed the boat" at our Fort Dodge meeting by not publicizing a special room for your ladies and a non-hostess luncheon. Even without announcement, 15 doctors' wives from out of town met with the local doctors' wives at the luncheon, and it was reported that they had an enjoyable time. Our faces are duly red from our failure to give due notice.

So this is the announcement for January 21 at Hotel Savery. We will provide a room where the ladies may meet, leave packages, *et cetera*, and there will be a non-hostess luncheon. Bring the girls along.

OPEN MEETING JANUARY 21

At the Fort Dodge meeting, quite a delegation of members came to your officers and asked to be given an opportunity to discuss mutual problems and have an exchange of ideas and views. This was thought to be a good suggestion. All general practitioners should have such a chance to air problems and discuss them, and where would it be more appropriate that they do so than at one of our Academy's postgraduate sessions? Accordingly, we shall not invite a speaker for our luncheon on January 21, but shall use the time for an open meeting.

To do this properly and to set it up so that all of us can get the maximum benefit from such a meeting, there will be a question box at the registration table. Will you please write your questions or state your problems on a card or paper and deposit it in that box during the morning? You do not need to sign your name if you do not wish to do so. In that way we can find what you want to discuss and arrange the open meeting to cover everything, if possible, within our time. This does not mean questions or introduction of subjects from the floor will be out of order, but we think a fairer distribution of our time can be made if we have an indication in advance of the matters to be brought up.

Many things are going on in medicine these days which might properly be discussed in the open by such a group as ours. Discussion which leads to constructive thinking and action is desirable. It is the "town meeting" in operation. It has the same advantages and disadvantages as the "town meeting." The advantages include a mutual airing and understanding of problems and offering an opportunity for a pooling of ideas for their solution. The disadvantages include the waste of much time on minor issues (which should be brought up but dispatched quickly) indulgence in personalities, etc. The open meeting can be the most democratic of all types of meetings, for everyone can bring in his problems and express his views. But he should do so with consideration for all others. This is our reason for asking you to write out your question or your problem and deposit it in the question box before the meeting. This is not to limit the subjects presented qualitatively or quantitatively as such would only be done to protect the Academy and all doctors from possible unfavorable publicity.

So bring your problems and let us see if we cannot have a worthwhile meeting.

AAGP FAMILY PLAN COMPLIMENTS BLUE CROSS

A letter received by the administrators of the AAGP Group Plan presents this interesting question:

"I am covered by Blue Cross and other insurance policies. Now, let me suppose that I run into hospital or nursing expense of over \$500.00. Then my

AAGP Plan takes over. However, that first \$500.00 may be covered by my other insurance. Do you disregard this insurance payment or is it considered as made by myself?"

The answer is as follows:

"We shall start reimbursing you at the 501st dollar of expense regardless of the fact some other source, such as Blue Cross, has paid all or part of the first \$500.00—or even if it pays more than \$500.00 worth.

"Another thing—the deductible applies to your combined expense for hospitals and the salaries of RN's. Let us take, as an example, that your hospital bill comes to an even \$500.00 and was paid for you by Blue Cross. In addition, you spent another \$500.00 for nurses. We would pay you \$500.00—the deductible would be offset by the Blue Cross and the practical result is complete reimbursement.

"In the case where Blue Cross pays the hospital on a 'formula' basis less than the hospital's regular schedule of rates, you should ask for a regular billing in order to overcome as much of the deductible as possible. This is fair to the Family Plan, when one thinks it through, for that is exactly the bill we would get if you had no Blue Cross. As we charge the same premium in either case, it follows that we should deliver the same goods."

MENTAL HEALTH CLINIC OPENS IN KEOKUK

The eighth county psychiatric facility in Iowa opened its doors at Keokuk on November 9, with a staff consisting of Dr. W. M. Crawford, of Burlington, as psychiatrist and director; a psychiatric social worker, the only full-time professional employee; and a secretary-receptionist. Dr. Crawford plans to spend Tuesday of each week at the clinic, and will be on call at other times.

In addition to fees based on ability to pay, the funds for operating the Clinic are to come from the federal government, through the Iowa Mental Health Authority, from the Keokuk Community Chest, and from private donors. In recent years, funds from the Mental Health Authority have made up roughly one-sixth of such agencies' budgets, but as the numbers of them increase and as federal appropriations for such purposes are decreased, a continually increasing share of the money must be raised locally.

Of the other seven county units, the Des Moines Child Guidance Center and the Bremer County Child Guidance Center work only with disturbed children and their parents, but the mental-health clinics in Linn, Black Hawk, Scott and Des Moines counties and at Broadlawns-Polk County Hospital accept patients of all ages. The Keokuk Clinic will belong to the latter group.

Each of the eight clinics will accept cases from outside the area that gives it major financial support. Indeed, the Keokuk Clinic announces its intention to serve "Keokuk's tri-state trading area."

POSTGRADUATE COURSES IN CHEST DISEASES

The American College of Chest Physicians will sponsor the Second Regional Postgraduate Course on Diseases of the Chest in New Orleans, on February 15-19, 1954, and the Seventh Annual Postgraduate Course on Diseases of the Chest at the Bellevue-Stratford Hotel, in Philadelphia, March 15-19, 1954.

Tuition for each course is \$75. Further information can be had from the Executive Director, American College of Chest Physicians, 112 East Chestnut Street, Chicago 11.

Clinical Pathologic Conference

(Continued from page 24)

toms rapidly recurred. Further irradiation could not be given. We have two patients—one of whom came in and died of pneumonia five years after we had treated him. He had maintained his advantage following radiation and had never had another symptom. We got a postmortem examination on him; and upon microscopic examination of the contents of the sella, there was no evidence of there ever having been any radiation of this area at all.

In one other case treated with over 3,600 roentgens, there was progression and regrowth of the tumor after six years. Those two cases show us that not all of the results are permanent, but most of them are. Some neurosurgeons think that perhaps neurosurgery should be done first, and this followed by radiation. This method is used in a number of clinics. Dr. Cushing first did not believe in radiation at all, but later came to use it postoperatively. The first patient whom we treated in this hospital was a patient on whom Dr. Cushing had operated and who was sent here for radiation when he had recurrence of his trouble. Thus, generally speaking, the first thing to do with a patient who has a pituitary adenoma is to give irradiation and, if this is not successful, to resort to surgery.

Dr. Lewis: Thank you, Dr. Kerr. Do you agree, Dr. Meyers, with what Dr. Kerr had to say? Do you want to make any further comments?

Dr. Meyers: I strongly endorse the therapeutic principles outlined by Dr. Kerr.

Dr. Lewis: Some very interesting points have been raised, but at this late hour it will not be advisable to prolong the discussion. Are there any questions or comments from the floor? If not then, we will be adjourned.

1954 AAGP SCIENTIFIC ASSEMBLY
CLEVELAND, OHIO,
MARCH 22-25

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

PHYSIOLOGY OF THE EYE: CLINICAL APPLICATION, by Francis Heed Adler, M.A., Second Edition. (St. Louis, The C. V. Mosby Co., 1931. \$13.00).

PLANNING GUIDE FOR RADIOLOGIC INSTALLATIONS, by the Committee on Planning of Radiologic Installations of the Commission on Public Relations of the American College of Radiology, Wendell G. Scott, M.D., Chairman. (Chicago, The Year Book Publishers, 1953. \$8.00).

REVIEW OF PHYSIOLOGICAL CHEMISTRY, by Harold A. Harper, Ph.D. (Los Altos, California, Lange Medical Publications, 1953. \$4.00).

DIAGNOSIS OF ACUTE ABDOMINAL PAIN, by William Requarth, M.D. (Chicago, The Year Book Publishers, 1953. \$5.00).

BOOK REVIEWS

AN ATLAS OF PELVIC OPERATIONS, by Langdon Parsons, M.D., and Howard Ulfelder, M.D., illustrated by Mildred B. Coddington, M.A. (Philadelphia, W. B. Saunders, 1953. \$18.00).

After glancing at the table of contents of this volume, one wonders whether its purpose is to train the "general surgeon" in gynecologic surgery, or to train the "gynecologic surgeon" in general surgery. After critically reviewing the work, one still wonders! Most of the standard surgical techniques or their modifications in gynecologic surgery are explained by means of step-by-step diagrammatic drawings. The illustrations are many, the step-by-step procedures are clear and the running commentary provided with each step is helpful. In this volume, written by two gynecologists for those interested in gynecologic surgery, such operations as entero-enterostomy, resection of small bowel, ileocolostomy, large-bowel resection and anastomosis, ureteral transplants, the repair of inguinal and femoral hernias and post-operative ventral hernias with and without fascia strips are also discussed. Other interesting bypaths pursued are femoral-vein ligations, and combined abdominal-perineal resection of the colon, rectum and anus, together with radical groin dissection. Actually, in spite of its rather broad base, the book is well conceived and well executed. Its principal value is as a bedside companion for the gynecologic resident. It will undoubtedly prove helpful in making the "general surgeon" a better gynecologic surgeon. But it is highly questionable whether it will make a "gynecologic surgeon" a better general surgeon. And beyond question, it will not make the general practitioner either a general surgeon or a gynecologic surgeon.—Tom D. Throckmorton, M.D.

SURGERY OF THE PANCREAS, by Richard B. Cattell, M.D., and Kenneth W. Warren, M.D. (Philadelphia, W. B. Saunders Company, 1953. \$10.00).

The book entitled Surgery of the Pancreas, by Richard B. Cattell and Kenneth W. Warren, comprises most of the known facts and pertinent theories on disease and treatment of the pancreas. The mate-

rial is presented to familiarize the individual with various ideas of etiology, diagnosis, and treatment, and an attempt is made to present various sides of controversial subjects in an unbiased manner. The correlation of the authors' statistics with those of others further serves to clarify the subject. The case histories following each chapter illustrate and augment the academic material preceding them.

This book will be a great asset to any member of the medical profession interested in pancreatic disease, for it will provide him both a review of present-day facts and theories and a reference text on the pancreas. The book is a well written, readable text containing pertinent information.—James Donahue, M.D.

CHILDREN OF DIVORCE, by J. Louise Despert, M.D. (Doubleday & Company, Inc., Garden City, N. Y., 1953. \$3.50.)

In the foreword, the author states that her purpose in writing this book is to help save marriages—the marriages of today's children whose parents have previously failed. She emphasizes throughout the book the importance of emotional tension and turmoil within the home and their effect upon all children, those of divorced parents and those whose parents are living together. The traumatic experiences within the home prior to a divorce are frequently of greater consequence than the divorce itself, and she stresses the point that divorce itself does not mean disaster. It is frequently true that the separation of parents is better than the emotional pitch which they maintain when they are arguing, fighting, and feuding. After divorce action is completed, it is necessary to reassure the children and to satisfy their emotional needs and to reestablish in them the feeling of security. These needs either must be maintained or, as frequently as necessary, must be developed. One should try to prevent as far as possible the grief, pain, and misguided defenses which are developed in these children.

The chapters on the court and the agencies are exceedingly valuable in that they show specifically what the author calls "the Law's Dilemma" and the fact "that Custody is Never Settled."

This book is a very interesting and valuable report on a vital subject, namely, disturbed children. It should be read by all lawyers, jurists, physicians, and the many others who are concerned with the care and development of children.

Herbert C. Merillat, M.D.

SEXUAL BEHAVIOR IN THE HUMAN FEMALE, by Alfred C. Kinsey, Ph.D., W. B. Pomeroy, C. E. Martin, and P. H. Gebhard. (Philadelphia, W. B. Saunders Company, 1953. \$8.00.)

Dr. Kinsey's second report, Sexual Behavior in the Human Female, followed a similar report, in 1948, Sexual Behavior in the Human Male. The present report has been given advance "summaries" and discussions in popular magazines and newspapers until there remains little to say in a professional journal. However, regardless of advance publicity, this report brings out into the open many findings which physicians have

long known existed, but which the general public has previously been unable to believe. There is a great value in the long and painstaking work of Kinsey and his collaborators; however, one must realize that the group reported on represents generally a group of women 20 to 50 years in age, approximately 49 per cent Protestant, 12 per cent Catholic, 29 per cent Jewish, mostly of above high school education. These are, however, relatively "well adjusted" women, and the results can be used as guideposts for marriage counselors and physicians.

The study shows a very definite change in the attitude or approach to sexual problems both in the group of younger women (those born since 1920) and in the older group.

Religious sanctions seem to be the most important single factor in controlling sexual conduct. Legal restrictions are less effective.

Doctor Kinsey minimizes psychological factors in sexual responses and emphasizes anatomic and physiologic factors. The chapters on orgasm include studies on pulse rates, breathing rates, blood pressure, peripheral circulation and even electroencephalographic records.

This study is a very painstaking report on findings in a large group of females and will be very valuable to those professionally concerned with problems of human behavior. The bibliography is extensive, and there are many charts and records which add to the value of the report.

Herbert C. Merillat, M.D.

PERIPHERAL NERVE INJURIES, by Webb Haymaker, M.D., and Howard Ulfelder, M.D. Second Edition. (Philadelphia, Saunders, 1953. \$7.00).

This is the second edition of a book dealing exclusively with peripheral nerve injuries. Much of the subject matter has been developed following study of injuries encountered in both World War II and the Korean War. Particularly interesting are the anatomical charts and the excellent illustrations that are liberally interspersed through the text.

Because of the difficulty encountered in the treatment of this type of injury, this book continues to prove of particular value to all physicians, but especially to orthopedic surgeons, neurologists, neurosurgeons and physical therapists. The authors should be congratulated upon their success in correlating the basic anatomy with the recommended treatment. —E. M. George, M.D.

YEARBOOK OF MEDICINE, by Paul Beeson, M.D., Carl Muschenheim, M.D., Wm. B. Castle, M.D., Tinsley R. Harrison, M.D., George B. Eusterman, M.D. and Robert Williams, M.D. (Chicago, The Year Book Publishers, Inc., 1953. \$6.00).

This is a review of the important new articles appearing in the literature of the world in the field of internal medicine in the past year. These are done in synopsis form so that one is bothered neither by review of the history of the disease, drug, or scientific method under discussion, nor by controversial theories. The author's method of investigation, his results and the salient conclusions derived therefrom are briefly and clearly presented. The thoughtful notes by the editor help to give proper perspective to the material presented. The reader will want to look

up the original articles in some cases in which he is especially interested.

It provides the best way I know of to review the new contributions to the entire field of internal medicine with a minimum of effort. Although many important articles in the American literature are not reviewed, it must be said that the selection is representative, and the inclusions from foreign literature are worthwhile.—Charles H. Gutenkauf, M.D.

STEPS IN EXPANDING THE V-A PROGRAM

The phrase "presumption of service-connection" explains in part the great increase in the rolls of V-A service-connected cases in the last few years. Once a presumption of service-connection is accepted by the government, the veteran usually is entitled to exactly the same consideration as one who was wounded in battle or whose condition developed while he was in uniform.

In addition to rating a top priority for full medical care—hospital, outpatient and home-town—the veteran with a "service-presumed condition" is also eligible for financial compensation if his disability is found to be 10 per cent or more. Thus there is a possibility of a veteran's receiving a monthly check from the government as compensation for an illness contracted after return to civilian life, in addition to receiving free treatment for it from the V-A.

Although not every presumption of service connection is recognized as valid, if a contest is to be made the burden of proof is on the government. In certain cases the presumption is conclusive, denying the government any chance of challenging the claim. (In this report all categories will be regarded as rebuttable unless they are identified as conclusive.)

Here are the steps in the development of the situation:

1921—Presumption of service-connection authorized for all tuberculosis and psychosis cases diagnosed within two years after discharge from service.

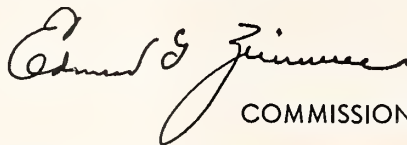
1923—Congress extended that limit from two years to three.

1924—Any veteran shown to have specified diseases or conditions prior to 1925 was presumed to be a service-connected case. The list of qualifying diseases was made to include paralysis agitans, encephalitis lethargica and amebic dysentery. Memos from the medical director of the Veterans Bureau allowed government care, beginning no later than one year after discharge, for arteriosclerosis, leukemia, diabetes, arthritis, cancer, heart condition, and a few others, but did not take in acute medical conditions.

1933—The Economy Act repealed all presumptive benefits added since 1921, but authorized the president to reinstate them as he thought wise. The president reinstated chronic diseases (without enumerating them), provided they were 10

(Continued on page 48)

STATE DEPARTMENT OF HEALTH



COMMISSIONER

GAMMA GLOBULIN LABELING EXPLAINED

The following letter describing the labeling of gamma globulin for use in prophylaxis of measles and infectious hepatitis was received from the Division of Civilian Defense Requirements of the Public Health Service on October 12, 1953. Our shipment received for measles and infectious hepatitis prophylaxis November 1 bears the label "Poliomyelitis Gamma Globulin."

In order that physicians and public health personnel may not think we are careless in the distribution of poliomyelitis gamma globulin, we are making available this copy of the last official gamma-globulin directive.

GAMMA GLOBULIN LETTER NO. 24

TO : State and Territorial Health Officers

SUBJECT: Labeling of Gamma Globulin for Use in the Prophylaxis of Measles and Infectious Hepatitis

Most of the gamma globulin solution processed this year, in addition to meeting the requirements for Immune Serum Globulin (Human), has been tested for poliomyelitis antibody and has been labeled "Poliomyelitis Immune Globulin (Human)," if it passed the test. There has also been a supply of material meeting the requirements for Immune Serum Globulin (Human) which has not been tested for poliomyelitis antibody or which had not passed that test and therefore had been labeled "Immune Serum Globulin (Human)."

The solution which has been issued up to now toward fulfillment of the allocations to the States and Territories for measles and infectious hepatitis has been labeled "Immune Serum Globulin (Human)." It is expected that the current supply of material so labeled will soon become exhausted. Thereafter, except for small quantities of Immune Serum Globulin (Human) which may be produced from time to time, material issued for measles and infectious hepatitis will be labeled "Poliomyelitis Immune Globulin (Human)." The label, as well as the package insert of the product identified as "Poliomyelitis Immune Globulin (Human)" indicates that the solution is intended

for use in the prophylaxis of measles and infectious hepatitis as well as poliomyelitis.

In anticipation of the time when you may receive a supply of Poliomyelitis Immune Globulin (Human) for measles and infectious hepatitis, you may wish to notify the physicians and others concerned in your State or Territory as to this change.

It should be noted that allocations for poliomyelitis use for the balance of 1953 will continue to be separate from that for other uses and therefore the supplies maintained at your points of distribution should be kept separate with respect to poliomyelitis use and other uses.

FREE V-D SERVICE STOPPED

The following memorandum regarding State Department of Health, Division of Venereal Disease Control funds for the care of venereal disease cases was sent to all county medical societies on November 27, 1953:

"This is to advise that, due to lack of sufficient funds in the Division of Venereal Disease Control of the State Department of Health, contractual agreements which have provided free diagnostic and treatment services for venereal diseases at Broadlawns Hospital, Des Moines, and the State University Hospitals, Iowa City, have been terminated as of December 1, 1953."

Henceforth, all medically indigent patients requiring such services must be referred to those hospitals through county welfare channels.

SODIUM RESTRICTED DIETS

Various types of special diets are available, to physicians only, from the Nutrition Service of the State Department of Health.

The sodium restricted diet is being used quite extensively as part of the therapy in the treatment of various diseases. Since the level of sodium prescribed may vary from 200 mg. to 2,000 mg. or more, it seems desirable to have a basic plan from which other levels of sodium restriction can be prescribed.

Today we regard the special diet as being only

a modification of the normal diet to meet the needs of the patient. A well planned normal diet will include the Basic 7 food groups. If an individual eats the recommended amounts from each group daily, he can be reasonably certain that his food intake will provide a sufficient amount of the nutrients to meet the standards recommended by the National Research Council. Since a patient on a sodium-restricted diet needs the same basic food groups, we do not want to omit any of them.

Following is a modification of the Basic 7 food plan, the amounts recommended from each group, and the approximate sodium and protein content of each group. The food included has not had sodium added in commercial processing, in preparation at home, or at the table. This diet will provide approximately 1,500 calories.

THE BASIC LOW SODIUM DIET
400-500 Mg. Sodium or 1 Gram Salt

Group	Food	Amount	Sodium	Protein
			mg.	gm.
I.	Leafy, green or yellow vegetable	½ cup	9	1
II.	Citrus fruits	1 serving	1	1
III.	Other fruits and vegetables			
	potato	1 small	1	2
	fruit	2 servings	5	2
	vegetables	1 cup	8	2
IV.	Milk	2 cups	240	16
V.	Meat, poultry or fish	4 ounces	100	28
	egg	One	40	6
VI.	Enriched bread and cereal			
	low-sodium bread	3 slices	25	6
	salt-free cereal	½ cup	—	3
VII.	Salt-free butter	4 teaspoons	1	—
			400-450	65-70

Additional modifications of the Basic Low Sodium Diet can be made either to restrict the sodium further or to provide an increased amount.

200 mg. sodium or .5 gram salt

By using a dialyzed or low sodium milk instead of regular milk, the sodium content of the diet can be reduced to approximately 200 mg. and the protein level will be maintained between 65-70 grams.

1200 mg. sodium or 3 grams salt

Each slice of white bread contains approximately 200 mg. sodium, and of whole wheat bread 300 mg. If the regular bread replaced the low-sodium bread on the basic diet, the diet would provide approximately 1200 mg. sodium or 3 grams salt.

4-7 grams salt

Such a salt-restricted diet calls only for the elimination of salt in cooking and at the table,

and the elimination of highly salted foods and salt-preserved foods

Additional information on specific foods to include and exclude on the Basic Low Sodium Diet can be obtained from the Nutrition Service.

SECOND HEART INSTITUTE

The Second Institute on Cardiovascular Diseases sponsored by the Speakers Bureau of the Iowa State Medical Society, the Iowa Heart Association and the Division of Heart Disease of the State Department of Health, in cooperation with the College of Medicine of the State University of Iowa is to be held at the Veterans Administration Hospital, in Des Moines, on Friday, January 29, 1954.

The afternoon program, 3-5 p.m., will be devoted to a consideration of vascular hypertension. The principal speaker is to be A. C. Corcoran, M.D., from the Research Division of the Cleveland Clinic Foundation. The evening program, 7:30-9:30 p.m., will concern peripheral vascular disease, and Carl A. Moyer, M.D., professor of surgery at the Washington University Medical School, St. Louis, will give the main address. A complete program will be mailed to interested physicians shortly.

There will be a social hour from 5:15-6:15 p.m., followed by a dinner at 6:30 p.m.

The Third Institute on Heart Diseases is to be held in Sioux City during the month of May, 1954.

MORBIDITY REPORT

Disease	Nov. 1953	Oct. 1953	Nov. 1952	Most Cases reported from these counties
Diphtheria	2	0	4	Black Hawk, Woodbury
Scarlet Fever ..	71	38	75	Black Hawk, Des Moines, Polk
Typhoid Fever..	1	2	2	Ringgold
Smallpox	0	0	0	.....
Measles	284	87	182	Dubuque, Emmet
Whooping Cough	111	45	55	Scott, Union
Chickenpox ...	307	149	355	Boone, Des Moines, Dubuque
Brucellosis	21	24	29	Black Hawk, Emmet, Polk, Wapello, each 2 (others 1 to a county)
Meningitis men.	1	1	3	Webster
Mumps	161	104	47	Boone, Dubuque, Emmet
Poliomyelitis ..	40	69	278	Calhoun, Polk, Webster (16 paralytic, 17 nonparalytic, 7 unspecified)
Rabies in Animals	10	14	12	Muscatine 3, others 1 to a county
Infectious Hepatitis	141	149	38	Polk, Pottawattamie, Webster
Tuberculosis ..	67	91	63	For the state
Gonorrhea	55	71	68	For the state
Syphilis	151	188	75	For the state

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Publications Chairman*, Dexter, Iowa
President—MRS. EDWARD B. HOEVEN, 224 E. Alta Vista St., Ottumwa
President-Elect—MRS. LESTER R. HEGG, Rock Valley
Secretary—MRS. ROBERT P. MASON, 5818 Chamberlain Drive, Des Moines
Treasurer—MRS. HOWARD SMEAD, 3333 Grand Avenue, Des Moines

NATIONAL CONFERENCE

The 10th Annual Conference for State Presidents, Presidents-elect and National Committee Chairmen was held in the La Salle Hotel at Chicago November 18, 19, 20. Your president and president-elect attended.

The Conference was called to order by Mrs. Leo Shaefer, National President, who presented Mrs. Geo. Turner, President-Elect and presiding officer of the Conference.

This is an annual event called in order that state officers may meet and exchange ideas and inspire each other to greater effort in the continuing fight against apathy, indifference and selfish unconcern which is all too prevalent among doctors' wives.

Important guest speakers included Doctor Edward McCormick, President of the AMA, who spoke on "Auxiliary Activities in the Preservation of Democracy" and Dr. Franklin D. Murphy Chancellor, University of Kansas. His topic was "How to Build Health and Win Friends."

Two and one half days were crowded with speeches and discussions. All of the proceedings, including the remarks of Doctors McCormick and Murphy, will be published in the National Bulletin. If you would like to be currently informed as to the activities and the policies of your National Auxiliary, there is no better source than your own national magazine.

MRS. EDWARD B. HOEVEN

SIXTH DISTRICT AUXILIARY MEETING

The Sixth District Auxiliary meeting was held in the Gold Room of the President Hotel, Waterloo, on October 13. Following a fine luncheon, Mrs. Russell S. Gerard, President of the Black Hawk Auxiliary, welcomed guests from many counties. Mrs. James F. Gerken, Waterloo, Councilor of the Sixth District, introduced the speakers: Mrs. E. A. Larsen, Centerville, Chairman of Nurse Recruitment and Loan Fund; Mrs. Lester R. Hegg, Rock Valley, President-Elect; Mrs. Harold A. Spilman, Ottumwa, Chairman of the A.M.A. Education Fund; and Mrs. Edward B. Hoeven, Ottumwa, State President.

Each of the State Officers gave an interesting report relative to her field of Auxiliary work, and each one highlighted aims for the future.

Mrs. Frederic Loomis, Waterloo, gave a vivid description of the water-color paintings of the late Lela Briggs, of La Porte City. It was thrilling to see our Iowa countryside through the eyes of a really great artist. Mrs. Loomis showed, also, a collection of dolls made by Lela Briggs. There were lovely ceramic heads, frilly dresses and fancy hats. The display gave one the desire to create something besides doing the everyday urgent and pressing tasks.

MRS. CRAIG ELLYSON

FOURTH DISTRICT NEWS

On November 13, 1953, members-at-large of the State Auxiliary were entertained at brunch at the home of Mrs. Joe M. Krigsten, Sioux City. Mrs. Lawrence Pierson acted as co-hostess. Guests of honor were Mrs. Lester R. Hegg, Rock Valley, President-Elect, and Mrs. Charles H. Flynn, Clarinda, First Vice President of the State Auxiliary. They discussed membership in the Auxiliary, steps in organizing, dues, the constitution, Future Nurses' Clubs, etc. The talks were enthusiastically received. Mrs. Leo Gaukel, Onawa, accepted chairmanship for group organizing of Monona County, and Mrs. Harry Vander Stoep, Lemars, will act as chairman for Plymouth County.

MRS. JOE KRIGSTEN,
4th District Councilor

FALL BOARD MEETING

Mrs. Edward B. Hoeven, State President, presided at the fall meeting of the Executive Board of the Iowa State Auxiliary which convened at 10:00 A.M. November 24 at the Iowa State Medical Society Building in Des Moines.

There was a balance of \$1625.17 on hand in the treasury on November 1. Membership has increased from 807 to 824, with 10 new members-at-large. Two new counties are in the process of organizing, with a possible third in the spring. District meetings have been held at Creston, Sheldon, Waterloo, and Sioux City.

Mrs. Ben F. Kilgore and Mrs. Noble Irving, Jr. reported on the progress of plans for the annual meeting.

The President stated that pins for the past Presidents are now available.

The name of Mrs. M. N. Voldeng, the first President of the Iowa Auxiliary, was approved for honorary membership.

Methods for increasing subscriptions to *TODAY'S HEALTH* were discussed.

Mrs. Lester R. Hegg, President-Elect, gave a résumé of the recent Chicago Conference.

Mrs. H. C. Merillat, Chairman of Work for the Handicapped, stated that there had been five sales through the state with a realization of \$3600, which is \$200 less than was raised last year. However, there will be one more sale, at Burlington, in the spring.

Dr. Ransom D. Bernard, General Manager for the Iowa State Medical Society and Mr. Don Taylor, Associate Executive Secretary, addressed the Board. Dr. Bernard referred to the work of the Clay County Auxiliary and the recognition it had achieved by mention in *THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*. He pointed out the fact that Iowa ranks 2 per cent above the national average in the number of medical graduates who settle in their native state to practice medicine. He recommended that one of the Advisors or a member of the State Society office staff address Executive Board meetings, rather than an outside speaker.

Mr. Taylor discussed items on the agenda of the Public Relations Committee of the Iowa State Medical Society which would meet November 25. He stressed the fact that there were particularly good relations between the Society and *THE DES MOINES REGISTER*. Plans are in progress for a medi-

cal edition in a Sunday supplement of *THE REGISTER* later on. It is felt that it would be a long stride toward good public relations. The idea is not new. Many other states have done the same thing with very good results.

WALLACE'S FARMER runs a column "Iowa Doctors Say," which has been well received.

Mrs. E. A. Larsen, Chairman of Nurse Recruitment and the Loan Fund, presented a number of problems which have developed as the fund and the loans have increased.

1. A rotating committee would be advisable so that there might always be one or more persons on the committee who thoroughly understood the work.

2. Funds should be provided in the State Auxiliary budget for the functioning of this committee.

3. Adequate up-to-date record books should be provided and kept.

4. The loan fund should be separate from the State Auxiliary treasury and a bonded member should be in charge of it.

5. The State Auxiliary should buy an economical number of Future Nurses' pins for purchase by local Auxiliaries at a saving of 25 cents per pin. (This item was approved by the Board.)

6. A standard for granting loans should be devised:

- a. Should girls taking training outside of Iowa be allowed a loan?

- b. Should there be a time-limit on re-payment?

- c. Should not the local Auxiliary recommending a girl for a loan investigate her?



State officers who spoke at the District meeting held in the Gold Room of the President Hotel, Waterloo, on October 13. Reading from left to right: Mrs. E. A. Larsen, Chairman of Nurse Recruitment; Mrs. R. S. Gerard, President of Black Hawk County Auxiliary; Mrs. James F. Gerken, Sixth District Councilor; Mrs. Lester R. Hegg, President-Elect; Mrs. H. A. Spilman, Chairman A.M.A. Education Fund; Mrs. Edward B. Hoeven, State President.

d. Should the fund be made available to those taking practical nursing?

Mrs. H. C. Merillat, Mrs. L. A. Coffin, and Mrs. James Downing were elected to the Nominating Committee. Mrs. E. A. Larsen and Mrs. K. M. Chapler were appointed to the committee by Mrs. Hoeven.

MRS. K. M. CHAPLER,
Publications Chairman

COUNTY AUXILIARY ACTIVITIES

Black Hawk

Forty-five members attended the November meeting of the Black Hawk County Auxiliary, which was held in the home of Mrs. Frederic G. Loomis, Waterloo. Following a tasty Italian dinner, Mrs. Roger White sang, accompanied by Mrs. Eugene Smith.

The following officers were elected for the new year: Mrs. R. F. Nielsen, President; Mrs. Herbert Shulman, President-Elect; Mrs. Richard V. Corton, First Vice President; Mrs. Richard L. Miller, Second Vice President; Mrs. Roger White, Corresponding Secretary; Mrs. Morris Beddoes, Recording Secretary; Mrs. Lewis Zager, Treasurer.

The Craft and Hobby Show, our fourth annual sale for the handicapped, held November 5 through 7 in Waterloo, totaled \$523.58.

The November meeting concluded with group singing.

MRS. CRAIG ELLYSON

Clay

The Clay County Woman's Auxiliary had its November meeting at the home of Mrs. C. C. Jones, Spencer, Iowa. These meetings are in the form of a coffee and are held in the mornings.

A report on the first completed project was given. The Auxiliary maintains an area in the Health Information Center at the Clay County Fair, held in Spencer, in September. A movie on nursing was shown in the projection room. A register was placed on a nurse's desk, serviced by an attractive red-haired mannequin dressed in a nurse's uniform and pointing to the register. A back drop of posters on nursing and *TODAY'S HEALTH* was used along with the Clay County Auxiliary sign.

Thirty-seven girls signed up for information on nursing and practical nursing. They represented thirty-one counties. From the office of the State Medical Society, each of these girls received a packet of information on nursing with literature on all nursing schools in Iowa and other pertinent materials, along with a letter of information.

Over four hundred copies of *TODAY'S HEALTH* were distributed from our literature table, along with materials on all forms of nursing and health pamphlets from the Department of Health.

A report on our Future Nurses Club of the Spencer High School was presented. This club, in its second year, had its initiation of members at

the new Spencer Hospital. Mrs. Frank Edington, Spencer, this year's sponsor from the Auxiliary, was assisted by the Auxiliary president, Mrs. Dean H. King, Spencer, Mrs. Wayne Hurd, R.N., member of the hospital board, Mrs. Myrna Soholm, R.N., Hospital Administrator, and Miss Ruth Anderson, R.N., Superintendent of Nurses. Following initiation, the students were given paper caps to wear and were served a buffet lunch in the new nurses' cafeteria, from a table beautifully appointed in the club's chosen colors.

The Future Nurses entered a float in their school homecoming parade and are now working on their program booklet for the year.

The Auxiliary, having only six active members, decided to let the FNC sell *TODAY'S HEALTH* and have the Auxiliary's share of the money to finance a trip to visit Des Moines hospitals. While in the city, they will put on a skit for the Annual Spring Meeting of the Auxiliary.

The Auxiliary prepared cookies and had charge of serving tea and coffee during the open house of the new wing of the Spencer Hospital, and worked with the Clay County Tuberculosis and Health Association on the Free Chest X-Ray Program sponsored in Clay County this month. Every member took part in the American Education Week, November 8 to 14, and visited the schools.

A new-member project was next on the planned program, and all members took names of doctors' wives in surrounding towns where there are no organizations. These people will be asked to become members-at-large. After the holidays, they will be invited to a meeting which the Auxiliary will sponsor in this area.

All our husbands are donating to the AMA Educational Fund.

Mrs. George Fieselmann, Spencer, legislative chairman, gave us a five minute survey of present legislation.

Mrs. E. E. Munger, program chairman, will have our program in booklet form this month.

We are small, but mighty.

MRS. DEAN H. KING
President

Mrs. Howard Smith, of Woodward, was named president-elect of the Iowa Health Council at a meeting held in Des Moines on November 19, and Dr. John D. Conner, of Nevada, and Dr. John J. Shurtz, of Eldora, were named members of the executive committee. Mrs. C. C. Inman, of Bancroft, chairman of the women's committee of the Iowa Farm Bureau Federation, is president this year.

Woodbury

The Sioux Mesdames of Woodbury County sponsored a most successful Craft and Hobby Show on October 15 through 17 at the Younker-Davidson Store in Sioux City. Mrs. Martin Ryan and Mrs. Edward Donohue were Chairmen.

The December 9 meeting will be held at the Martin Hotel, Sioux City. Mrs. Jerry Raush is in charge of the Christmas program.

The Woodbury County Medical Society is holding a special dinner on December 17 in honor of Dr. Robert Larrimer, President of the Iowa State Medical Society. Mrs. John Schwartz is party chairman.

MRS. JOE KRIGSTEN

Wapello

Nineteen members of the Wapello County Medical Auxiliary met at the home of Mrs. Glenn C. Blome, on Tuesday, November 3, at 6:30 P.M., for a dinner meeting. Hostesses for the evening were Mrs. Richard Hastings, Mrs. T. L. Vineyard and Mrs. G. Raymond Johnson.

Mrs. E. B. Hoeven gave a talk on "Mental Health." Mrs. Phillip McIntosh gave a report on what had been done so far in an effort to start a Future Nurses Club.

MRS. R. D. DALAGER

NURSE RECRUITMENT PROGRAM

The nurse recruitment committee of the Auxiliary to the AMA has suggested a number of ways in which such an effective program may be developed:

Publicize available scholarships to high school Councilors.

Make brochures on nursing available to all high school libraries.

Form "Future Nurses Clubs" in high schools, preferably in the Freshman year.

Counsel the students to the need for nurses—do not forget the boys.

Help the student to select the right school for her needs (practical-graduate or collegiate).

Make a survey of the nursing schools in your State.

Urge that all Schools of Nursing become accredited schools.

Encourage inactive registered nurses to offer their services to the community.

Educate the Public to the need for nurses by providing speakers before clubs.

Establish revolving funds, money returned by graduates in a reasonable time after graduation—thus providing further loans.

Radio broadcast information regarding available scholarships and loans.

Check areas that have had no contact—unorganized counties and counties where there are members-at-large. They may interest enough doctors' wives in this project to develop a nucleus for an Auxiliary.

Arrange a "Nurse Sunday" or a "Nurse Recruitment Week" in your community.

Cooperate with Hospitals in their nurse training program—more hospitals call for nurses than train them.

Interest Industry to provide scholarships—they take nurses but do not train them.

Take High School Students on tours through hospitals.

Keep students in training schools by:

a. making living quarters attractive.

b. plan recreation for student nurses.

Contact Woman's Auxiliary, 535 N. Dearborn St., Chicago, Ill. for the following:

a. Books about nursing.

b. Films on nursing.

Train a speaker's bureau on Nurse Recruitment.

In South Carolina, The State Hospital Association, The State Medical Association, The Blue Cross and The Blue Shield plans have recently sponsored and carried out through their joint efforts and expense an interesting project aimed in this direction,—the selection of "Miss South Carolina Nurse for 1953." This has been given due publicity in the daily press and need only be mentioned here. The plan has been followed with good results for several years in North Carolina and the same results can be expected in this state.

This recognition of these young women and the opportunity thereby given them for some recognition in their own feminine right will undoubtedly serve to increase the interest of the girls who are finishing high school and who are otherwise qualified to enter the field of nursing.

South Carolina Auxiliary Bulletin
March 1953

SPEAKERS' BUREAU SCHEDULES

RADIO

WSUI—IOWA CITY

Tuesday at 11:45 a.m.

"THE STORY OF SURGERY"

January 5	Abdominal Surgery
January 12	Surgery in Infancy
January 19	Surgery of the Chest
January 26	Neurological and Brain Surgery

WOI—AMES

Thursday at 11:15 a.m.

"MAIN STREET MEDICINE"

January 7	Rural Health Committee
January 14	Medical Grand Jury
January 21	Medical Research Foundation
January 28	Community Health Survey

TELEVISION

WOI-TV—AMES

Friday at 8:00 p.m.

January 1	Alcoholism
January 8	Hospital Services
January 15	Mental Health
January 22	Hospital Costs
January 29	Moral and Legal Responsibility of the Pharmacist

SOCIETY PROCEEDINGS

MEETINGS

Black Hawk

The Black Hawk County Medical Society heard an address on "Diagnosis and Differential Diagnosis of Diseases of the Urinary Tract" by Dr. Norris I. Heckel, of Chicago, President of the Mississippi Valley Medical Society, at its meeting on November 17. At the meeting on December 15, Dean Norman B. Nelson, of S.U.I., spoke on the problems of the College of Medicine.

Calhoun

At the meeting of the Calhoun County Medical Society held on November 19, in Lake City, Dr. C. E. Knouf, of Lake City, was elected president; Dr. D. C. Carver, Rockwell City, vice-president; Dr. Ashton McCrary, Lake City, secretary-treasurer; Dr. Paul Ferguson, Lake City, delegate; Dr. W. C. Kennedy, Somers, alternate delegate; and Dr. P. W. Van Metre, Rockwell City, censor.

Dubuque

At the November 11 meeting of the Dubuque County Medical Society, Dr. Eugene Van Epps, secretary of the Council of the Iowa State Medical Society, discussed the functions of that group. Dr. Donovan F. Ward and Dr. Clarence A. Darrow, members of the County Society's Public Relations Committee were in charge of the program.

Johnson

Dr. Rodman E. Taber, of the Department of Surgery at S.U.I., was the speaker at the November 28 meeting of the Johnson County Medical Society. His topic was "The Tissue Bank."

Linn

Dr. Louis L. Friedman, of the Department of Obstetrics and Gynecology at the University of Minnesota, Dr. Wm. C. Keetel, professor of obstetrics and gynecology at S.U.I., and Dr. H. Lloyd Miller, of Cedar Rapids, were participants in a discussion of infertility at the November 8 meeting of the Linn County Medical Society.

Dr. Willis M. Fowler, professor of medicine at S.U.I., spoke on "The Treatment of Anemias" at the meeting of the Society on December 10.

Marshall

Officers of the Marshall County Medical Society were elected at a recent meeting. Dr. D. Dale Harris is president; Dr. L. O. Goodman is vice-president; and Dr. H. E. Sauer is secretary-treasurer. Dr. Eugene Van Epps, head of the Department of Radiology at University Hospitals, Iowa City, provided the scientific program.

Page

Dr. Carroll B. Larson, an orthopedist on the staff of University Hospitals, Iowa City, was the principal speaker at the November 19 meeting of the Page County Medical Society.

Polk

Dr. Walter G. Maddock, professor of surgery at Northwestern University College of Medicine, in Chicago, spoke on fluid-electrolyte balance at the November 18 meeting of the Polk County Medical Society.

Poweshiek

Dr. Rubin Flocks and Dr. R. G. Carney, of University Hospitals, Iowa City, and Dr. James C. Cain, of the Mayo Clinic participated in a panel discussion of cancer at a meeting held in Grinnell on November 10. Physicians from adjacent counties, as well as ones from Poweshiek, attended.

Sac

At the November 12 meeting of the Sac County Medical Society, Dr. Perry P. Amick, Des Moines pediatrician spoke on latest theories in his field, emphasizing particularly the hyaline membrane syndrome. At the December 10 meeting, Dr. L. J. O'Brien, Fort Dodge surgeon, spoke on fractures about the ankle joint. Dr. J. H. Stalford, president of the county society and Life Member of the Iowa State Medical Society, introduced the speakers.

Scott

Congressman Thomas E. Martin of the First District of Iowa spoke to the members of the Scott County Medical Society on December 1 about federal legislation under consideration that is of interest to doctors. The following were elected officers of the society: Dr. W. J. Balzer, president; Dr. J. R. Shorey, president-elect; Dr. H. M.

Hurevitz, vice-president; Dr. Atlee B. Hendricks, secretary; and Dr. F. Dale Wilson, treasurer.

Woodbury

At the November 19 meeting of the Woodbury County Medical Society, Dr. Frank Coburn, of the Department of Psychiatry at S.U.I., spoke on "Psychiatry and General Practice."

PERSONALS

Dr. Donald Kyer has been appointed acting superintendent of the Mental Health Institute at Independence, succeeding the late Dr. Max Witte. Dr. Kyer came to the Institute on October 26, 1953, to serve as clinical director, after three years as instructor in psychiatry at the University of Arkansas School of Medicine. He is a graduate of the college of medicine at Boston University and has done considerable postgraduate study at Harvard.

At the semi-annual meeting of the Iowa State Urological Society, in Iowa City on December 5, the speakers included **Drs. Robert J. McNamara**, Dubuque; **Wayland K. Hicks** and **Dwayne E. Howard**, both of Sioux City; **Robert P. Meyers**, Ottumwa; and **Clifford W. Losh, Jr.**, Des Moines. The president of the Society is **Dr. E. M. Honke**, Sioux City, and the secretary is **Dr. F. Harold Entz**, Waterloo.

On November 15, **Dr. Garfield Miller** began the general practice of medicine in Calmar. He is a graduate of the Bowman-Gray school of medicine, in Winston-Salem, North Carolina, and did his internship at Detroit, Michigan.

In mid-November, **Dr. Alexander J. M. Findlater** arrived in Olin to begin medical practice. Though Dr. Findlater is a native of Scotland and has lived there since 1934, he is not a newcomer to Iowa. He once practiced in New Albin and in South Dakota.

On November 14, **Dr. Robert G. Wilson**, of Missouri Valley, left for service as a flight surgeon with the Air Force, at San Antonio, Texas.

Dr. R. A. Dorner, of Des Moines, spoke on "Cancer of the Lung," and **Dr. S. E. Ziffren**, of the Department of Surgery, University Hospitals, Iowa City, spoke on "Cancer of the Breast" at a meeting held at the Ottumwa Hospital on November 19 under the joint sponsorship of the State Department of Health, the Iowa Division of the American Cancer Society, and the Iowa State Medical Society.

Dr. Gordon A. Flynn has joined the staff of the West Davenport Clinic in the general practice of medicine, surgery and obstetrics. He is a graduate of the College of Medicine at S.U.I. and served his internship at the City of Detroit Receiving Hospital.

The regional meeting of the American College of Physicians, on November 21 at Milwaukee, Wisconsin, heard three members of the staff of the S.U.I. Cardiovascular Laboratory deliver papers on their specialties. They are **Drs. J. W. Culbertson**, **George N. Bedell** and **Johann L. Ehrenhaft**. **Dr. Willis M. Fowler**, of S.U.I., presided at one of the sessions and participated in the clinicopathologic conference which was one of the features of the meeting.

Plans are underway to honor **Dr. W. F. Missman** for his 44 years of service to the Klemme community. A banquet at which he is to be guest is to be held at the high school gymnasium there on the evening of January 11.

Dr. Lawrence D. Amick, who has practiced in Sac City for the past three years, is leaving there to accept a clinical fellowship in the Department of Physiatrics at the Mayo Clinic. He is a 1945 graduate of the College of Medicine at S.U.I.

The Rohlf Memorial Clinic, at Waverly, has announced the association of **Dr. Henry M. Hanson**. Dr. Hanson received his M.D. at Northwestern and served his internship and a residency in surgery at the Wesley Memorial Hospital, in Chicago.

Dr. W. Gordon Hansen has joined **Dr. C. L. Bain** in the practice of medicine and surgery at Corning. Dr. Hansen is a native of Sioux City and a 1951 graduate of the University of Nebraska College of Medicine.

As of December 1, 1953, **Dr. John W. Schwartz**, of Sioux City, announced that **Dr. Anthony H. Kelly** had joined him in the practice of general and thoracic surgery.

Dr. Jack Fickel, who recently was released from flight-surgeon duty with the Navy, has opened an office for general practice in Red Oak. He is a 1949 graduate of the College of Medicine at S.U.I.

DEATHS

Dr. George Allen Biebesheimer, 71, who had engaged in general practice at Reinbeck for 42 years, died there on November 25, after a heart attack.

Dr. Nelson McPhee Whitehill, 83, pioneer Boone physician and a Life Member of the Iowa State Medical Society, died there on November 14 following a heart attack. He had practiced 50 years in Iowa, the last 41 of them in Boone. A Life Member of the Iowa State Medical Society, he retired in 1946.

Dr. Grant Augustine, a Council Bluffs and Minden physician and surgeon for some 45 years, died on November 15 at Little Rock, Arkansas. He was 80.

Dr. Max E. Witte, 58, Superintendent of the Mental Health Institute at Independence, died suddenly on November 12, two days after experiencing a coronary attack.

Dr. Claudius L. Sievers, 77, who had practiced 16 years in Calumet and 31 years in Denison, died on November 3.

Dr. Robert M. Cullison, 61, chief medical officer of the regional office of the Veterans Administration at Winston-Salem, North Carolina, died suddenly, of a heart attack, on November 3. Dr. Cullison was an alumnus of the College of Medicine at S.U.I., and had maintained his membership in the Grundy County Medical Society.

Dr. James Marr, 52, until July 1, 1953, a member of the staff of the Glenwood State School, died on December 3 at Grafton, North Dakota, where he had become superintendent of the North Dakota School for Feeble Minded Children.

Dr. Edward John Wehman, 73, a radiologist who had practiced at Burlington for 46 years, died there on December 5 after a six weeks' illness.

Dr. Oliver Stillman Barber, a Life Member of the Iowa State Medical Society who practiced medicine for many years in Creston, died in La Grange, Illinois, on November 15, where he had been making his home with his son. Dr. Barber had been in poor health for several years.

Steps in Expanding the V-A Program

(Continued from page 39)

per cent or more disabling and were discovered within a year after discharge.

1934—Congress reestablished any case that had or could qualify under the 1924 act, subject to more restrictive official dates for the beginning and ending of World War I.

1948—Public Law 748 listed the 23 chronic diseases that the president had declared presumptive in 1933; it added 16 tropical diseases to the list; and it authorized the V-A administrator to add more.

1950—Public Law 747 was amended to allow a three-year presumptive period for pulmonary tuberculosis with 10 per cent or more disability. At the same time, Congress voted to provide veterans of the Spanish-American War, the Philippine Insurrection and the Boxer Rebellion with any type of *out-patient* care.

1951—Congress extended the presumptive period for multiple sclerosis to two years, if disability is 10 per cent, and extended the time for active psychosis, which had been one year for full medical benefits, to a two-year conclusive presumption for hospitalization only.

1953—Congress again amended Public Law 748 to extend the three-year period for pulmonary tuberculosis to include *all types* of active tuberculosis.

A number of bills on presumption of service connection are under consideration in Congress this winter:

1. Extend the presumptive period for all chronic and tropical diseases from one to three years. S. 601 Sparkman; H.R.25 Mrs. Edith N. Rogers (Mass.); H.R.1573 Battle (Ala.).

2. Extend period to three years for multiple sclerosis or psychoses. S.762 Martin (Penna.), H.R.33 Rogers.

3. Extend period for malignant tumors from one to two years. H.R.45 Rogers.

4. Extend period for amyotrophic lateral sclerosis from one to two years. H.R. 3070 Frelinghuysen (N.J.).

5. Extend three-year period for tuberculosis to seven years. H.R.2097 Hagen (Minn.).

6. Make the three-year period for active pulmonary tuberculosis and the two-year period for multiple sclerosis conclusively presumptive. H.R. 5012 McCarthy (Minn.).

ROSTER OF IOWA PHYSICIANS IN MILITARY SERVICE

As of December 10, 1953

Ackerman, J. H., Clarksville (Atlanta, Georgia)	Sr. Asst. Surgeon, U.S.P.H.S.
Arnold, K. E., Sioux City (Port Hueneme, Calif.)	Lt. (j.g.), U.S.N.R.
Bartholomew, R. D., Lake City (Walnut Creek, Calif.)	Lt. (j.g.), U.S.N.R.
Benton, J. S., Des Moines	1st Lt., A.U.S.
Bogle, W. C., Marion (Great Lakes, Ill.)	Lt., U.S.N.R.
Braateli, N. T., Des Moines (Rock Island, Ill.)	1st Lt., U.S.A.F.
Brennan, J. E., Des Moines (Camp Pendleton, Calif.)	Lt., U.S.N.R.
Broman, J. A., Maquoketa (Ft. Sill, Okla.)	Capt., A.U.S.

- Buzan, E. F., Des Moines
(Yuma, Arizona)
- Christensen, J. R., Eagle Grove
(Palo Alto, California)Lt. A.U.S.
- Cline, H. L., Iowa City
(Denver, Colorado)A.U.S.
- Couchman, P. G., Des Moines
(Ft. Riley, Kansas)1st Lt., U.S.A.F.
- Daut, R. V., Davenport
(Westover Field, Massachusetts)Capt., U.S.A.F.
- Davidson, M. C., Emmetsburg
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Intestinal Obstruction

WARREN H. COLE, M.D.*
CHICAGO, ILLINIOS

INTESTINAL OBSTRUCTION is a frequent and serious disease, although the mortality rate has been improving during the past several years. Perhaps the most important explanation for this improvement in the mortality rate is the more intelligent use of intestinal decompression. However I wish to emphasize that, if used unintelligently, intestinal decompression may actually increase the mortality rate.

INCIDENCE

The frequency of the various causative factors in the production of intestinal obstruction depends upon the types of patients studied. For example, the incidence of external hernia is higher in any series limited to charity patients, and the incidence of obstruction due to adhesions is higher in private patients; the incidence of obstruction due to adhesions is particularly high in any series including only obstruction of the small intestine. In a recent survey of the literature, the author¹ found a 33 per cent incidence of obstruction caused by external hernia, 32 per cent obstruction due to adhesions and 15 per cent obstruction due to neoplasms. These correspond fairly closely to the figures reported by Nemir² who found incidences of 39.6 per cent, 35 per cent, and 23 per cent, respectively, in the 3 causes mentioned above. On the other hand, Bollinger and Fowler³ found a 41 per cent incidence of obstruction due to adhesions but only 23 per cent due to hernias. It should be noted however that the series reported by Bollinger and Fowler included only patients with obstruction of the small intestine. When patients with obstruction of the large bowel are included in a series, the incidence of obstruction due to cancer is higher.

CLINICAL MANIFESTATIONS

Fortunately, the diagnosis of an intestinal ob-

struction can be made very easily and accurately from the type of pain. Characteristically the pain is a cramp, present for a minute or two, then absent for a few minutes. Usually some discomfort exists in the abdomen between cramps. If the discomfort or pain between cramps is intense, the diagnosis of strangulation should be suspected. However the physician must be certain that the patient understands the definition of *cramp*, if he uses the term in obtaining the case history. Very few patients use the word discriminately; indeed most of them call any severe pain a cramp.

There is so much difference in the manifestations presented by high intestinal obstruction in contrast with those resulting from low intestinal obstruction that the two syndromes will be described separately.

High Intestinal Obstruction.—In high intestinal obstruction, the pain is usually of a typical cramp-like type. Almost invariably nausea and vomiting follow in a few hours. If the obstruction is complete, the patient may subsequently evacuate the portion of the intestinal tract distal to the point of the obstruction, but will pass no gas and have no further stool. When the obstruction is located in the pylorus or duodenum, there may be no cramps and the pain is extremely variable in type and intensity. Commonly, pain is absent in obstruction of this type, and the patient merely complains of abdominal discomfort and anorexia.

Distention is fairly common in high intestinal obstruction, but will be less evident in patients suffering from obstruction at the pylorus and in patients who are vomiting considerably.

The patient's abdomen should be observed for peristaltic waves or a pattern. Auscultation is very valuable for the reason that intestinal sounds are sharply increased in high intestinal obstruction. Palpation of the abdomen reveals a doughy resistance, but no muscle spasm unless strangulation is present. There may be slight tenderness, but, when

* From the Department of Surgery, University of Illinois College of Medicine and the Illinois Research Hospitals, Chicago, Illinois.

present, it is poorly localized and not necessarily centered over the point of obstruction.

X-ray examination is extremely helpful in making a diagnosis, for the obstructed intestine shows up as a distended loop with a herringbone pattern. (Fig. 1.)

Dehydration and electrolyte deficiency are common in high intestinal obstruction. The degree of each is dependent upon the duration of the obstruction and the intensity of vomiting. Dehydration is identified by dry tongue and lack of turgor and elasticity of the skin. Limitation of space does not permit a discussion of manifestation of electrolyte deficiency. It has been described elsewhere by the author and Laws.⁴ Of the electrolytes involved, sodium, potassium, and chloride are the most important. Deficiency of these elements are always present when vomiting occurs and intake has stopped. In intestinal obstruction, particularly of the small bowel, the blood volume is decreased sharply because of lack of oral intake, trapping of blood in the obstructive loop, and other causes. The N.P.N. is almost universally elevated.

Low Intestinal Obstruction.—The symptoms of colonic obstruction are much different from those of small-bowel obstruction. In the first place it may develop and be present for two or three days, with relatively insignificant symptoms. The initial symptom is usually anorexia and a feeling of fullness or discomfort in the abdomen.

Vomiting is uncommon, often occurring no more than once or twice, even though obstruction may have been present for four or five days. Obstruction of the colon is usually caused by cancer, but the type of symptoms cannot be distinguished from those of either obstruction by cancer or obstruction by adhesions, except that patients with cancer usually have a history of blood in the stool. Furthermore, in cancer patients there may be a history of loss of appetite, abdominal pain, and loss of weight for a few weeks or months preceding the onset of the obstruction. Constipation is of course present. The lack of passage of gas and of stool will develop almost simultaneously with the obstruction of the large bowel, since, especially in patients have obstruction due to cancer, the obstruction usually develops on the left side.

Intestinal cramps of the type described above are not present as commonly in low obstruction as in high. Dehydration and electrolyte deficiency are less prominent in low obstruction, but will be present because of the lack of oral intake.

Distention in low obstruction is quite marked and practically universal, largely because the ileocecal valve in most patients is patent. In spite of the fact that patients with low intestinal obstruction may have no vomiting and very little dehydration or electrolyte deficiency, they usually are quite ill. This "toxicity" is probably related to the distention and may be explained by the absorption of toxic products (produced by anoxia) in the wall of the intestine. The distention may be so pronounced that rupture of the cecum takes place.



Fig. 1. Plain x-ray film in a patient with obstruction of mid ileum by an adhesion reveals distention of small bowel with gas, but no gas in the large bowel.

Therefore, to prevent perforation, immediate operation is usually indicated in large bowel obstruction as soon as dehydration and electrolyte deficiency are partially corrected.

Palpation of the abdomen reveals the doughy resistance produced by the distention, but very little tenderness. Likewise there will be no muscle spasm unless strangulation or perforation is present. Auscultation will reveal increased sounds, but perhaps not with typical rushes as in high intestinal obstruction.

X-ray examination may be extremely helpful, for a distended colon with typical haustrations will be present, and fluid levels discernible. It is very important that barium not be given by mouth in these patients, but it may be given by rectum to identify the obstruction. However, it is essential that the barium not be allowed to pass above the point of obstruction in any significant quantity, lest an impaction of barium be produced above the obstruction. This is a serious complication and it interferes so markedly with the operative treatment later that the patient's life may be jeopardized.

Adynamic Obstruction Due to Paralytic Ileus.—Obstruction due to paralytic ileus presents symptoms similar to those discussed above, although a proper and thorough examination almost invariably reveals the correct diagnosis. It is very essential that the correct diagnosis be made, since the treatment of paralytic ileus is conservative (pri-

marily by intestinal decompression). As is well known, paralytic ileus develops after every abdominal operation, the duration depending upon many factors, including the amount of trauma, amount of bacterial contamination, and other factors. Without complication, paralytic ileus from celiotomy disappears 48 to 72 hours after operation.

Paralytic ileus may develop spontaneously. In such circumstances it is usually produced by perforation of a viscus (by trauma or through an ulcer). Occasionally it is seen after celiotomy because contamination due to section of a viscus gives rise to an infection, i.e., peritonitis.

There may be fever and leukocytosis, secondary to the peritonitis which is usually the cause of the paralytic ileus. Ordinarily, muscle spasm will be present, occurring soon after peritonitis develops. However, if the peritonitis develops after an operation, muscle spasm is seldom produced. X-ray examination with a plain plate reveals distended loops of intestine and fluid accumulation. An important differentiating feature in paralytic ileus is the presence of gas in both the small and large bowel (see Fig. 2). This finding is in contrast to the x-ray finding of distended small bowel in upper intestinal obstruction and distended large bowel in low intestinal obstruction.

One of the clearest diagnostic signs in paralytic ileus is the absence of intestine sounds as determined by auscultation.

DIAGNOSIS OF STRANGULATION

Some surgeons think it is so difficult to diagnose



Fig. 2. Plain x-ray in a patient with volvulus of the colon. Note the typical pattern of distended colon with haustrations.

strangulation that they advise immediate operation in practically every patient with intestinal obstruction for fear that strangulation may be present. I am definitely of the opinion that strangulation can be diagnosed, particularly if the patient has been under observation for a few hours. It is more difficult to diagnose strangulation in a newly admitted patient, for the reaction to transportation may be sufficient to produce symptoms and signs of considerable severity regardless of the type of pathology present. Because of the necessity for immediate operation in strangulation, it is worthwhile to recite the manifestations of this condition in detail.

An increase in the amount of pain is one of the most reliable indications of strangulation. The pain of strangulation is much more severe than the pain of the cramp itself. Usually the pain is so severe that the patients demand or require narcotics. Increase in abdominal tenderness is usually present along with the increase in pain, and likewise, it is usually located in the same area as the pain.

An increase in pulse rate is a fairly constant accompaniment of strangulation. It is produced in part by the pain, but it is accentuated by the loss of blood into the strangulated loop.

The development of muscle spasm is strongly indicative of peritoneal irritation, being produced by strangulation and peritonitis alike. Muscle spasm developing with early strangulation will become more prominent if perforation of the bowel takes place through the strangulation area.

The development of a mass is often indicative of a strangulated loop. It becomes palpable because of the edematous wall and large amount of fluid present in the lumen of the loop. Unfortunately, the mass may be obscured by the development of muscle spasm. It must be remembered that a mass may develop because omentum and loops of bowel are matted together subsequent to inflammation. Accordingly, the physician must bear in mind this possibility when he suspects strangulation.

Fever is fairly constant in strangulation, particularly if more than a few inches of bowel are involved.

Leukocytosis is fairly common in strangulation, but its presence will not be of much value in the early postoperative course, since a leukocytosis is present normally during the first few days following any major operation.

A fall in blood pressure may be produced by dehydration, sodium chloride deficiency and absorption of toxic products in the fluid produced by the strangulation. An additional possible cause of low blood pressure is the loss of blood into a partially strangulated loop of intestine or through perforation, with subsequent immediate contamination of the peritoneal cavity.

Obviously, the physician should not wait for the development of all these signs before he diagnoses strangulation, for delay in operation for strangulation is dangerous, and may be responsible for the patient's death. I have found increase

in pain and increase in pulse rate fairly accurate signs of early development of strangulation. Later signs, but not conclusive ones, are the development of muscle spasm and the development of a mass. However, the latter is not always indicative of strangulation, since an obstructed but not strangulated loop of intestine may be distended sufficiently to be palpable.

TREATMENT

There is difference of opinion as to the value and application of intestinal decompression in definitive treatment of intestinal obstruction. However, when obstruction is suspected, it is always good therapy to insert a tube through the nose into the stomach immediately upon the patient's entrance to the hospital, to evacuate the stomach and upper jejunum. If no more than 100 cc. of fluid are found in the stomach, the diagnosis of high obstruction will be very doubtful unless the patient has just vomited. In addition to the diagnostic information obtained from decompression, this procedure serves to evacuate the stomach and thus eliminate one of the major complications during anesthesia, namely regurgitation of the gastric content and its aspiration into the lungs.

Decompression as Definitive Treatment.—It should first be emphasized that decompression as definitive treatment is permissible and indicated in only about two types of obstruction, namely paralytic ileus and obstruction with adhesions. In

practically every instance, if paralytic ileus is not caused by some major complication such as peritonitis, intestinal decompression will result in cure. And in obstructions due to adhesions, it will result in relief in 60 to 70 per cent of patients. This percentage of relief is even greater in patients having an acute obstruction in the immediate post-operative course.

One of the most important features about decompression therapy is maintaining the patency of the tube at all times. To facilitate this patency, it is often desirable to insert a large stomach tube and evacuate food particles, particularly if the patient has eaten a short time previously. Allowing the patient to take sips of water at frequent intervals will usually help to keep the tube open. In other words, if the tube is allowed to plug, with cessation of decompression over a period of several hours, the patient's condition is jeopardized. Under these circumstances it is probable that an immediate operation would have been desirable.

In the author's opinion, the Harris and Cantor tubes are superior to the Miller-Abbott tube, largely because the weight of the mercury in the rubber bag at the end of the tube encourages passage of the tube around the duodenal curve and its propulsion through the intestinal tract down to the point of obstruction. However, our results have been just about as effective utilizing an ordinary tube in the stomach as when we passed a Harris or Cantor tube.

There are certain strong contraindications to the use of decompression as a definitive measure in certain conditions such as intussusception, volvulus, strangulated hernias, and obstruction due to gallstones, the last of which is comparatively rare. Decompression is not very effective in the treatment of obstruction due to malignant disease, or in the treatment of strictures resulting from scar. Accordingly, if any of these conditions are known to be present, decompression is valuable only to evacuate the stomach, and must not be continued as definitive therapy.

If decompression has been chosen for definitive treatment, the physician must watch the progress of the case very cautiously, lest strangulation develop under observation and not be recognized. Accordingly, the manifestations described under strangulation are watched for, and an immediate operation performed if a significant number of those signs develop.

Operative Treatment.—For reasons already stated, the clinician must choose the time for operation wisely. If decompression has been effective in relieving the obstruction due to adhesions, operation to sever the adhesion is usually necessary as an interval operation, because recurrence of the obstruction is so apt to take place. When an immediate operation is planned, considerable judgment must be exercised in deciding how much time can be utilized in preparing the patient for operation. The decrements needing correction are dehy-



Fig. 3. This patient had a complete obstruction of the sigmoid, with distention of the colon proximal to the obstruction. Barium given by rectum stops at the point of obstruction.

dration, electrolyte deficiency and anemia. All of these are important, but since a moderate anemia can be corrected with 2 or 3 pints of blood, which supply some fluid and electrolytes, the administration of blood becomes a very important part of pre-operative treatment. Often we operate on patients for strangulation before the dehydration and electrolyte deficiencies are completely corrected, but this correction should be well on its way before the operation is started. The administration of fluid containing electrolytes, of course, can be continued during the operation and immediately thereafter.

Certain principles in the operative treatment must be recognized and respected. In the first place, patients with intestinal obstruction are very ill and do not tolerate long operations. Therefore the operation must be performed with dispatch. Moreover, it is very essential that trauma be minimized. Manipulation of the intestine should be held to a minimum during the operation because the resulting edema and loss of fluid into the traumatized intestine tends to produce shock. Operative technic must be meticulous and carried out gently as well as rapidly.

Gangrene results in a sharp increase in mortality rate. But resection itself is just as great a peril. Accordingly resection must not be undertaken unless the blood supply of the intestine is demanded so much that gangrene will develop. Obviously it is just as important that resection not be omitted when the blood supply is damaged so much that gangrene will develop.

There are several new technics which have been introduced for determining whether or not the viability of a given loop of intestine has been jeopardized so much as to contraindicate its return to the abdominal cavity without resection. In general these methods are dependent upon blood supply through the loop. In one method fluorescein is injected, and its presence in the affected loop is determined qualitatively. I doubt, however, that any of these methods will take the place of the human eye's observing the return of a pink color and glistening serosa after the obstruction has been released and a few minutes' time has passed, to allow for return of circulation.

RESULTS

The results for the patient who survives an operation for intestinal obstruction are of course excellent, unless the cause of the obstruction (e.g. cancer) jeopardizes his life. The mortality rate at the present time should be between 10 and 15 per cent. The two most important factors in altering mortality rate are the duration of the obstruction and the incidence of strangulation in the series studied.

In a series of 205 cases of obstruction of the small intestine reported by Bollinger and Fowler, the overall mortality rate was 10.1 per cent. In another recent series which also included only obstruction of the small intestine, Reinus⁵ reported



Fig. 4. Plain x-ray film in a patient having innumerable peritoneal metastases from a carcinoma of the esophagus. Interpretation in a reproduced film is difficult, but the two distended loops in the mid line are small bowel, and the one in the upper right quadrant (patient's left) is colon. Absence of intestinal sounds lent support to the diagnosis of paralytic ileus. Because there was no obvious clinical explanation of the paralytic ileus (the metastases not being known), operation was performed to be sure a typical mechanical obstruction was not present.

an overall rate of 13.9 per cent. In this series the rate for simple obstruction was 12.5 per cent and in the strangulated group 37 per cent.

In Bollinger and Fowler's series, the mortality rate was 0 per cent if nothing more was required than release of the obstruction; it was 7.14 per cent if resection was performed for non-gangrenous bowel, 31.3 per cent if resection was performed for gangrenous bowel, and 40 per cent if resection was performed for gangrene and perforation. These figures illustrate clearly the seriousness of resection and gangrene. Of still more importance in the Bollinger and Fowler series was the observation that if decompression was carried out less than 24 hours before operation, the mortality rate was 0, if continued for 24 to 48 hours it was 11.1 per cent, if continued for 48 to 72 hours it was 25 per cent, and if 72 to 96 hours had elapsed since onset of decompression the rate was 100 per cent (only 2 cases). These data indicate clearly that if intestinal decompression is chosen as definitive treatment and the obstruction is not released in 24 hours, operation should be performed without further delay.

In a report of 430 cases of obstruction in the small and large intestine, Nemir² noted an overall mortality rate of 9.8 per cent. His series consisted of 5.5 per cent operations for external hernia, 7 per cent for obstruction caused by adhesions, 20.2

per cent for carcinoma, 78 per cent for obstruction of the colon and 31 per cent for presence of gangrene. Carcinoma accounted for about half of his deaths.

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Psychiatric Hospital Practice

WILLIAM MALAMUD, M.D.*

BOSTON, MASSACHUSETTS

THE STUDENT of the history of medicine is impressed with the fact that hospitals have played a more significant role in the evolution of modern psychiatry than they have in the development of any of the other phases of medicine. Its very emergence from the dark ages of ignorance and superstition, through the contributions of Pinel, Tuke and Rush, is inseparably linked with the developments in the Bicetre and Salpetriere, the Retreat at York and the Pennsylvania Hospital. Through the years that followed, in this country and abroad, psychiatric hospital practice has continued to serve as both the medium of expression and the indicator of progress in the profession. Even today, when we have come to realize the importance of breaking through the isolation of the closed hospital and most of us are reaching out for more intimate contact with the community, we still maintain the all-important relationship with hospital practice.

It seemed to me, therefore, that at the present time, when the psychiatric hospitals are undergoing a period of turbulent growth and reorganization, and in most cases are beset with numerous problems, it would be desirable to undertake a survey of the major phases of hospital activity and to evaluate their present status, their goals for the future and the means whereby these goals can be achieved. I propose to restrict myself to a few specific areas which are particularly relevant and in which I have had a measure of personal experience.

DIAGNOSTIC AND THERAPEUTIC TECHNIQUES

Being primarily clinically oriented, my interest turns first in the direction of the practical work with patients, and I should like to start out with a review of the present status of diagnostic and therapeutic hospital procedures, an evaluation of the progress we have made and an indication of the needs for further development.

There is no question that within recent years a great deal of activity has taken place in this area. A rich variety of new methods of treatment have

been introduced, procedures for diagnostic evaluation have been vastly improved and new ones have been devised, and the general care of the patient has risen to new levels of efficiency. What is even more important, we have come to appreciate more than ever before the importance of treating the individual rather than the disease, of utilizing the principle of a combination of measures and procedures, rather than depending upon any single type of therapy by any single representative of the therapeutic corps, and of keeping in mind not only the individual at the time we are treating him, but also the cross section of his past life and of his future needs.

It is not my purpose to undertake here a review and evaluation of all the methods of treatment and diagnosis that have recently been introduced and those which are still in the process of being initiated. There is no question of the great profusion of such methods and the vast field that they cover. They range all the way across the spectrum from social therapy and group treatment through individual psychotherapy to the shock, surgical and chemical procedures. A good many of them have been tested, and their actual values have been more or less defined. Others are still in the process of development, and we look to the future for more objective evidence concerning their values in practical application.

In a general way, however, it would be well for us to take cognizance of some of the fundamental principles involved and the particular needs that apply to the field as a whole. New methods, both therapeutic and diagnostic, but particularly the former, of necessity involve establishing precedents and venturing into new areas. The practical minded of us quite justifiably view these with a certain amount of skepticism and tend to curb the enthusiasm and over-evaluation that just as naturally characterizes the attitudes of those who have some personal interest in these new ventures. There is a great need in this area for the spirit of curiosity and progressive thinking. Opportunities must be given for the proper application and experimental

* Professor of Psychiatry, Boston University School of Medicine.

trial of new ideas, provided that the safety of the patient and the avoidance of obvious waste of effort are taken into consideration. We certainly must guard against the tendency to remain static in the face of changing times. The history of psychiatry shows too many instances of resistance by the overcautious and overskeptical, who, in opposing attempts to further the progress of knowledge, have inhibited and delayed the application of procedures that have eventually proved to be of great benefit. One of the most striking examples of such a reaction was the great wave of resistance that Freud and his followers encountered in their attempt to introduce the principles and technics of psychoanalysis into the field of psychiatry. It is true that essentially sound ideas will eventually prove themselves in spite of resistance, but aside from the fact that some of them actually may be lost because of too much resistance, the mere fact that their progress may be delayed is in itself a very unfortunate phenomenon that should be avoided as much as possible.

At the same time, however, we must also think of the other side of this picture. In the first place, we must take into consideration the psychological set of the enthusiastic proponent of a given idea, who naturally tends to over-estimate the value of his particular point of view, and having an emotional investment in it, is quite likely to overlook its shortcomings. It is here that the rank and file of us must maintain a realistic attitude and while being open minded and tolerant, must make adequate use of objective evaluation. This is perhaps more important in psychiatry than in any other field in medicine, since we do not as yet have the necessary quantitative and uniformly applicable standards of measurement that the other disciplines possess. Adequate and objective data of sufficient quantity, satisfactory use of control material, and avoidance of prejudice whether for or against a given idea are the greatest needs that face us today in this area.

And so it is that while we look for a liberal attitude in our hospitals as regards the introduction of new procedures and ideas, we must also guard against over-estimation, over-selling, and undisciplined wishful thinking. There is another point that must be kept in mind. Most of us, especially the younger generation of workers, are susceptible to overenthusiasm for new methods in preference to old ones, not only because they are better but also because they are new. We do not now possess, nor shall we probably ever have any panaceas that are applicable to all ailments, and in face of the backlog of problems that have failed to react satisfactorily to the older methods, we are very likely to become too optimistic about some new method and to discard old ones simply because they are old and have not proved universally helpful. This fact is brought to our attention particularly clearly when we undertake a review of the developments in psychiatric therapies during the

last one hundred years. All through these years, we have seen repeated swings of the pendulum to and fro as it has been influenced by the introduction of new ideas and led to temporary or even permanent discarding of old ones that were really very useful. Even today, for instance, as we read contributions such as were made by men like Samuel Woodward, Amariah Brigham, Pliny Earle, and others, we are often greatly surprised to find how much of what can be applied today was not only anticipated but actually practiced by them and their contemporaries years ago. One is reminded of Mark Twain's reference to the youth who at the age of fourteen was shocked to find how ignorant his father was and then at the age of twenty-one was surprised by the discovery of how much the old man had learned during the seven years. The important thing to remember is that progress, if it is to yield real gains, must be stabilized by the process of keeping up an uninterrupted line of communication with the achievements of the past.

This is just as true of methods of evaluation. Most of us have sooner or later come to appreciate the wisdom of our elders in the fields of medicine in general when they admonished us not to throw overboard diagnostic procedures of a general clinical type, simply because some new and, within their limited application, perfectly adequate laboratory measures have been discovered. We should *add* chemical tests, psychological procedures and other so-called exact methods to our general clinical evaluations, rather than completely to permit the new to supersede the old and become the sole criteria that we depend on. We will do well to remember that all of us are subject to the natural urge to discover some magic formula that is universally applicable, to find some single method, whether it be therapeutic or diagnostic, that will do the whole job, rather than to depend on a multiplicity of methods, which is the more tedious, even though in the end the most adequate, way of dealing with these problems.

DIVISION OF RESPONSIBILITY

This leads us to the consideration of another important aspect of this subject. A great many words have been used in extolling the virtue of the "team" approach, and, as is so frequently the case, the word *team* has come to stand as a symbol, which in the course of time, has lost a good deal of its intrinsic meaning. And yet it has a very important place in our work. The scope of personality maladjustments, by virtue of the progress that we have made, has come to be so broad and complex, and both theoretically and diagnostically to involve so many different disciplines and skills, that representatives of no single one of the disciplines can cover the whole field adequately. Most psychiatrists today have come to realize this fact and, at least on a verbal level, will accept the importance of working in conjunction with the social

worker, the nurse, the psychologist, the occupational therapist and the like. All too frequently, however, that acceptance is a mere gesture rather than a real appreciation of the value of the contributions that can be made by the other disciplines. Most frequently we find that this interrelationship is reduced to a matter of convenience in the sense that the psychiatrist will call on the aid of, let us say, the social worker or the psychologist only when he is too busy to attend to some of the aspects of the problem himself. Obviously this attitude is also found in the representatives of the other disciplines. There is a pronounced tendency to overlook the fact that each one of the disciplines cannot possibly be considered entirely self-sufficient and to regard the others as simply subsidiary. True "team" work will be achieved only when we recognize not only that each one of the members is trained in his special skills and body of knowledge and must be regarded as capable of making a contribution which will not only be of assistance to the others, but also that he and he only knows how to utilize such skills and knowledge properly in the process of coordination of all of these skills for the achieving of a common goal. Each one of them, however, must work in conjunction with the others, for if he thinks himself capable of dealing with the entire problem, he will find that he has restricted himself to something of a vacuum and has achieved only part goals. We all know how frequently this occurs in the case of a physician adequately trained in the administration of one form of therapy or another, who carries out the therapeutic procedure adequately but neglects to take cognizance of the fact that his patient's personality problems necessarily permeate the whole of his existence, that they are dependent upon his interrelationships with other people, his adjustment to a given setting, his job as well as his family life, and his intellectual pursuits. In a measure, as we develop blind spots to all these other activities, we find ourselves working with a single facet of the patient's personality, and regardless of how much we may learn and accomplish in that particular respect, we fail to achieve adjustment of the individual to life as a whole. This is particularly apt to occur in hospital practice, since we find that we have achieved what appears to be an adequate adjustment of the patient to some specific problem or to the therapist himself, but that this adjustment is limited to the hospital setting and fails to carry over into life situations in the community. The patient's process of rehabilitation to his original milieu must actually start as soon as he is admitted, and can be successfully achieved only through the medium of coordinated team work. This means a broadening of the base of the therapeutic program, in which systematic occupational therapy will find its specific application alongside of good nursing care, and in which we shall consider the patient's somatic problems while we deal with his fears and doubts. While we are dealing

with his emotional difficulties, we shall also help him work out his social problems and keep alive his contacts with the community in which we hope he will again find his proper place. If, however, the hospital's objective is to be the readjustment of the patient in his social setting, then it must develop and maintain a closely integrated relation with the community itself. But historically psychiatry has had to contend with powerful deterrents in this respect, and even today we have not been able to overcome them completely.

INTEGRATION WITH COMMUNITY

A century ago, our predecessors reached out into the community to remove the mentally sick from the jails and almshouses and to gather them into the more appropriate setting of the hospital, where their conditions could be more adequately understood and more successfully treated. We have argued that in the hospital we had better physical and psychological facilities, adequately trained personnel and a better chance to protect the patient against the ravages of some of the social pressures to which he was subjected within the community—all of which was true. Eventually, however, the community has proceeded to sever its contacts with these sick people and has seemed to welcome the opportunity of being rid of cumbersome and even threatening individuals. It has placed them in the "monasteries of the mad," has built walls around them, has forgotten them, and, in the process, has included the personnel of the hospitals with the patients. Unfortunately, we ourselves have contributed materially to this process by isolating ourselves from the community.

The existence of this condition and its effects upon the patients' illness and the psychology of the personnel has long been recognized. For a number of years now, vigorous efforts have been made by workers, both within the hospitals and outside of them, to break these barriers and to cast off these chains of our own isolation, even as Pinel has done in regard to the patients. But the psychological influences over the years have struck deep roots within us, and even today, in spite of the progress made in this direction, many of us still maintain a high degree of "ivory tower" withdrawal in our relations both with the community and with the rest of the medical profession. It seems to me that what is needed most urgently now is the appreciation of the fact that a close interrelation with the community is important not only because of what *we* can do for society, but also for the effects *society* can have on us. The logical medium through which this can be accomplished is, of course, the outpatient clinic. It is the place where our workers can see in real life the dynamic factors at work in the early phases of psychiatric disturbances, their dependence and effects upon social processes, and the extent to which manipulation of the social factors may hasten or retard the development of the disease. Here

too, of course, we have the greatest real opportunity for testing the efficacy of preventive measures which in theory we have developed in working with the patients in the hospital. Finally, it is here that we can put into practice the plans that we develop for the rehabilitation and social readjustment of our hospital patients when they have reached a stage when such a step is indicated.

The fact that all of these activities require the use of a number of diverse skills and, therefore, that one single person will not be likely to succeed in them singlehanded (even if he be a psychiatrist!) should not deter us. On the contrary, it is in the clinic work, more than in any other phase of psychiatry, that both the value and attainability of "team work" can be most effectively demonstrated.

Such a clinic, however, will have to be an integral part of the hospital set-up if it is to accomplish the objective we have set for it. The separation of the outpatient clinic from the hospital, physically as well as in terms of special personnel, actually defeats the primary purpose of bringing to the community the benefits of the continuous experience of work with patients in the hospital, as well as the secondary purpose of bringing to the hospital worker a realistic picture of the dynamics of the socio-psychological basis of personality disturbances. From a practical point of view, however, this is not as easily achieved as one might expect. In the process of isolating the mental hospital from the community, which has resulted from the attitude of the group to the hospital and that of the hospital to the group, we have actually established a physical separation, and, in most cases, the mental hospital has been carefully placed as far as possible from the center of the community which it serves. Not only that, but in some communities there even is a law that mental hospitals cannot be built within city boundaries. The difficulties that develop out of this arrangement are so obvious that we need not stress them. How can adequate community relations be established when we have no community around us? This may all sound like belaboring a point which is well known and accepted, but I wish to draw your attention to the fact that even today we find examples of large hospitals with all modern facilities and equipment being constructed in areas which are as far from the community they are supposed to serve as they can possibly be removed. All of the efforts of progress made in this direction will not be of any avail if the physical lines of communication are so strained that the relationship cannot help withering.

PERFECTION A CONSTANTLY RETREATING GOAL

Closely related to these considerations is another aspect of the need for an extension of the scope of our activities. Hospitals are built and facilities are provided which, at any given time at least, should enable us to apply in practice all the knowledge

that we have acquired in the past. It is true that there is a tendency in most of us, particularly after we have achieved a high level of efficiency, to slow down and be satisfied to rest on our laurels. But progress by its very definition is not static and is impelled by its own momentum, creating its own new impetus. You cannot assemble a group of well-trained and ambitious workers in a setting where the continuous influx of new patients presents a constant challenge and expect them to remain at a standstill. As they work, they are always faced with new possibilities and problems, seeking solutions and finding new procedures. Thus they feel the need for change in the setting. Actually it would be highly unfortunate if this were not the case. As a result, we find that the progress achieved in the past has created new needs for the future, primarily of two sorts. 1) There is need for an increase in facilities which may have been quite satisfactory yesterday but have become inadequate today—facilities, not only in terms of the physical equipment, but also in terms of personnel. In other words, there is a need for a continuous and progressive program for personnel *training*. 2) There is a need for new knowledge, since the more we learn about the causes, nature, methods of diagnosis and treatment and social rehabilitation of these maladjustments, the greater becomes our ability to appreciate the complexity of our field, the wider is the horizon of problems unsolved and the more pressing is the need for *research*.

A great deal has been said within recent years in regard to the need for adequate training programs for professional personnel in the various disciplines involved in psychiatric practice. Figures have been compiled of which, I am sure, you are all aware. The patient load is continually on the increase. As we work with these patients and learn more about the causes of their illness, we gain new knowledge in the field of prevention, and the scope of our activity increases. All this means the need for recruiting new workers. I am certain that you are all aware of the fact that this increase in the need of personnel is not arithmetical, but geometrical. We have to consider not only the simple fact that more patients require a greater number of trained psychiatrists, social workers, etc., but as we discover methods of evaluation and treatment for conditions that up until now were considered hopeless, the demand increases for personnel to do this work. There is a considerable shortage now, more keenly felt in some areas than in others. Tomorrow the shortage will be greater and of wider distribution unless we can increase our training capacities. The effectiveness of a training program depends upon the availability of the following ingredients: 1) An adequate supply of candidates who seek such training; 2) An adequate supply of persons who are qualified and able to teach these candidates; 3) Adequate facilities in terms of clinical material, physical equipment and funds. The first, namely a flow of new candidates

seeking such training, is perhaps the least of our worries. It is true that the last two or three years may have seen something of a decrease in the number of candidates seeking entrance into the field, but even today, the number seeking such training, at least in some centers, exceeds the facilities which are available for this training. Even at that, however, and with an eye towards the future, we must actively participate in the process of securing a steady flow of such candidates by going further into the field and creating conditions which will serve as a stimulus for young people to become interested in the work and to see its needs as well as the opportunities that it offers. To accomplish this, those of us who are actively engaged in hospital practice will have to undertake more active educational participation, particularly in colleges and professional schools, and make the students aware of the magnitude of the problem and the opportunities for public service they will meet in this field. The hospital will have to become a more active participant in the teaching programs of medicine, social work, nurses' training, occupational therapy, and others. With few exceptions, the hospital has not yet taken up this part of its function. We must also keep in mind that from a broad point of view, it is not only the actual recruitment of candidates for specialized training that is involved, but that, for instance, in teaching medical students the psychiatric aspects of disease in general, in addition to getting a few of these students interested in a psychiatric profession, we shall be able to contribute much more by rendering all of the medical profession alert to the problems of personality maladjustment and the effects of psychological problems in the causation of somatic disease, and thus take care of one of the greatest needs in this field that we have today.

The other important requirements in the establishment of a successful training program are the availability of proper facilities and teaching personnel. As far as facilities go, an adequate quantity and variety of clinical material is most important. Obviously, there is no lack in the number and variety of patients, although sometimes one wonders whether a superabundance may not act as a deterrent. In addition to that, there is the need for properly equipped libraries, laboratories, teaching aids and funds for the program. The real problem as we see it today is the question of the availability of training personnel. Even here, when we look at the over-all picture we find that there are some resources of available teachers that, for one reason or another, have not been used. The first problem here is one of geographic distribution. Unfortunately, most of those who are best equipped to train personnel are clustered in large metropolitan areas, or in close proximity to universities and medical schools. At the same time, we have a great many hospitals properly equipped as far as facilities are concerned but not provided with adequate teaching personnel. Within its own perma-

nent staff, each hospital must develop properly qualified teachers whose main activity is the instruction and guidance of the rest of the professional personnel, including the trainees. Not only is this important for the purpose of training new candidates, but the whole level of efficiency and up-to-date status of hospital function is raised to a remarkable degree by the introduction of such a training program. It not only teaches the trainee, or even the younger men on the staff, but continually keeps the very teachers themselves keenly aware of new developments. More use can also be made in the training of candidates in any of the disciplines in a psychiatric hospital, by the liberal utilization of members of other disciplines. In the case of psychiatry, for instance, a great deal can be accomplished by the utilization of social workers, psychologists, nurses, bio-chemists, physiologists, and representatives of the other medical specialties.

TRAINING PROGRAM NEEDS BROADENING

This brings us to the consideration of the fact that there is a definite need for broadening the base of our training programs, as a means of counteracting tendencies to emphasize some aspects of the work at the expense of others. Some seem to specialize more in diagnostic minutiae than in the development of therapeutic skill. Others tend to glorify and overemphasize certain aspects of dynamic psychopathology, neglecting adequate attention to the understanding of the effect of organic factors on human behavior, just as some concentrate on bio-chemistry and physiology and neglect the psychological and social aspects of psychiatric problems. It is also to be regretted that in some of the most active centers of training there is too much of a trend towards concentrating on individual problems and towards paying too little attention to adequate management and administration. There should be an attempt made to cut across disciplines and sub-specialties and have the future members of our profession become adequately aware of the importance of the fields that lie peripheral to the so-called "purely psychiatric" aspects. Good medical care, proper appreciation of social interrelationships and proper facilities for occupational and diversional activities must become parts of the general basic training in hospital psychiatry. There is also the great importance of stressing the need for learning-by-doing. It is true that we cannot at present find any justification for the old idea, which unfortunately still persists in some hospitals, of letting the young trainee loose in the hospital without adequate supervision and having him learn by himself. On the other hand, it is just as regrettable to find an overemphasis on lectures, seminars, and general didactic teaching to the point where active, independent work with the patient is reduced to an absurd minimum. The trainee may thus learn a great deal of book knowledge, but then be unable to deal

with practical problems as they arise when he is set free from dependence upon his teachers. Finally, it is essential to keep in mind the importance of developing within the ranks of the trainees a healthy curiosity and a desire to learn and to broaden the field of our knowledge through the medium of investigative work. This brings us to the next important aspect of hospital psychiatry.

RESEARCH

We have learned a great deal within recent years about the causes, nature, therapy and prevention of mental disease, and a great deal of this knowledge has come from fields outside of psychiatry. The basic sciences of bio-chemistry, physiology, genetics, sociology and psychology have helped us in clarifying the confusion that existed years ago and in answering many puzzling questions. The most trying, but also, perhaps, the most challenging aspect of research, however, is that the more we learn, the greater becomes our need for further study. Each question that is answered through investigation brings in a host of new ones. Each method that is discovered makes possible new avenues of investigative procedure. Each therapeutic measure introduced brings in with it questions concerning its real efficacy and the need for testing its indications and contra-indications. This has been particularly evident in some of the more important phases of our research progress. Thus we have set out to find the actual role which heredity plays in personality problems. The research which has been undertaken by the geneticists has undoubtedly brought forth a great many pertinent data. But the more we have learned about heredity and its relationship to human behavior, the more convinced we have become that it should be regarded as but one feature in the concept of constitution which transcends the bounds of hereditarily transmitted characteristics and is closely tied up with the question of modifying environmental influences, and the psychophysiological processes in the development of the infant. At the same time, it became necessary to search for more clarity in regard to the bio-chemical and structural nature of the genes themselves. Today, therefore, the problem of genetics is much more complex than it was a number of years ago and has opened up a vast field for research, particularly into the relationship between heredity, bio-chemistry, and developmental processes.

Similarly some of us had hoped to find an ultimate answer to the problem of personality disturbances through the investigation of fundamental physiological processes, but as we have progressed in the study of this aspect of human behavior, we have found that physiological processes and the psychodynamics of emotions are intimately bound up, the one affecting the other, and thus the whole field of psychosomatic research is today showing much greater potentialities and needs for research than ever before. A similar state of affairs

is found in the relationship of social forces and individual psychology, wherein research in each one of the two begets more problems in both and has again opened up new fields in the studies of social psychology, and cultural anthropology.

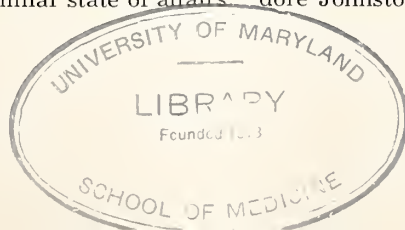
Added to these are the research problems that are introduced by what seem to be empirical or accidental discoveries in the clinical work of the psychiatrist. New methods of treatment, such as, for instance, the shock therapies, psychosurgery, chemotherapy and others, in such measure as they have been applied successfully, have also led to the opening up of new fields for research. Psychosurgery, for instance, has given rise to a host of new problems, as well as methods of procedure in the investigations of the physiology of the nervous system. Group therapy and psychoanalysis have introduced new queries as to inter-personal relations and intra-personal processes of psycho- and socio-dynamics. At the same time, with each discovery of a new method, whether diagnostic or therapeutic, the research worker is faced with the important problem of devising technics for the objective evaluation of their efficacy. Thus we stand today after having achieved so much up until the present, facing a greater complexity and multiplicity of problems than ever before, and we earnestly hope that hospitals will continue to carry on with this work, searching for answers to old questions while they formulate new ones.

SUMMARY

I have made an attempt to present to you a survey of some of the more important aspects of hospital psychiatry, emphasizing particularly the areas of evaluation and treatment, community relationships, training and research. In my admittedly sketchy presentation I tried to concentrate on the present status of these areas of our work, their background in the past, the problems with which we have to deal, and possible lines of attack in our search for solutions. The task is great, but I feel certain that we possess the innate potentialities to cope with it, as is amply demonstrated by achievements in the past. We must not forget however, the tremendous amount of hard work and enthusiasm that had to be mobilized in making such an achievement possible, and we must be prepared for similar demands on our resources in the future.

S.U.I. RESEARCH IN OPHTHALMOLOGY

Men and women from S.U.I. are scheduled to present five of the twelve demonstrations and papers on the program of the February 7 meeting of the Association for Research in Ophthalmology, Midwestern Section, at the University of Chicago Medical School. They are Bernard Schwartz, Betty Danes, P. J. Leinfelder, M.D., Howard D. Ostler, A. K. Hansen, George W. Bounds, Jr., M.D., Theodore Johnston, M.D., and Robert J. Davis.



Sacro-Iliac Lipoma Versus Pannicular Hernia

E. C. KNIGHT, M.D.

MARSHALLTOWN

LOW BACK PAIN may at times be a difficult diagnostic problem. We, as physicians, often shrink from patients with backache when they present a history of recurrent attacks. Likely as not, they have been to many physicians and, because results are minimal, they have often resorted to chiropractors or osteopaths. For that reason, our opinion is soon formed that these patients are neurotics. I feel that complaints of low back pain should not be lightly dismissed, for, in practically all of these patients, the cause can be found and treatment readily administered.

Admittedly, the number of my cases of sacro-iliac lipoma is small, for they appeared over a relatively short period of time, but I'm sure I would still be missing some of these cases had not a member of my family been suffering with this same condition.

Ficarra and McLaughlin¹ stated that they found only two references to herniation of fat through the lumbodorsal fascia, and they reported one case associated with lipomas. However, in seven cases of sacro-iliac lipomas which I saw within a period of six months, there were three cases of associated pannicular hernias. Because all patients were completely relieved of their pains, it is impossible for me to state which relieved those symptoms, the removal of the lipoma or the simple repair of the hernia. But it would seem that the lipoma was the causative factor and the hernia a coincidental finding.

In my experience, women predominated six to one, but, with the observance of more cases, I find more of a three to one ratio. The ages of my patients ranged from 20 to 56 years, and the duration of their symptoms varied from a few months to 15 years.

SYMPTOMS

In all cases, these patients came in because of a history of backache, and motion aggravated the pain in each instance. Typical symptoms were pain in the back on forward bending, or pain radiating down the lateral side of the leg corresponding to that side of the back which was causing trouble. The patient might find that lying on his back would increase the pain. Some patients gained relief by wearing an orthopedic corset, but for some it aggravated the condition. One man stated it always hurt him to tie his shoe on the affected side,

whether he bent over or crossed his leg to tie it. In nearly all of these cases, patients stated the pain would last several days at a time, and then they would be free of pain for several days. The pain was described by some patients as being a nagging ache, whereas for others the pain recurred acutely following such a simple motion as stooping over to pick up an object from the floor. There was no history of any significant back trauma in these patients.

FINDINGS ON EXAMINATION

The patients all look well, although an occasional one walks with a list to the affected side. I feel the most important findings are those found locally, but, to make a proper diagnosis, a complete physical examination is essential. I am not going to list the differential diagnosis for this condition except to state that (1) pelvic conditions cause backache, but rarely as compared with other more common causes and (2) even though x-ray may show arthritis of varying degrees, if a novocaine block, which I shall later discuss, relieves the pain, I am seldom concerned as to the amount of x-ray evidence of arthritis.

DIAGNOSIS

Diagnosis of this condition rests primarily upon two factors: viz., (1) finding a mass or masses and (2) the relief of pain by means of novocaine block. In regard to the masses, these may be extremely variable. One person may have distinct nodules that are easily palpated and rolled under one's fingers, and the next may have no discrete palpable nodules, but, instead, a noticeable thickness of the subcutaneous tissue on the affected side, as compared with the unaffected side. It is this inability to feel any discrete nodule that makes the diagnosis of lipoma questionable. But, with positive results from the second procedure, a patient can be operated and a lipoma found and removed with complete relief of all symptoms.

The second criterion for diagnosis is the procedure of novocaine block. I believe this is probably the most definitive diagnostic procedure, and I base my prognosis on the results of this injection. If I feel a thickness or nodules on the side causing pain, I inject only the side affected, even though one-half of the patients I've found have bilateral lipomata. About two inches lateral to the midline and on a line extending out between the fourth and fifth spinous process of the lumbar vertebrae, I

1. Ficarra, B. J., and McLaughlin, W. J.: Low Back Pain Due to Pannicular Hernias, J.A.M.A., 150:855, (Nov. 1) 1952.

inject 8 to 10 cc. of one or two per cent novocaine down to the bone. I always precede the novocaine with a barbiturate 1½ hours before injection. A few minutes after injection, I palpate the affected areas and also ask the patient to get up and go through all motions that had previously caused pain. If the tenderness to palpation is markedly decreased and the pain diminished or completely gone on motion, and provided that there was a definite thickness or nodules present, I feel confident in telling the patient that he or she will probably experience either partial or, more probably, complete relief after surgery. If the patient has perhaps 50 per cent relief, I feel that the novocaine was not injected in the proper site and that the results of surgery will still be good.

In the three cases in which I found hernias, I was unable preoperatively to tell any difference or make any diagnosis other than sacro-iliac lipoma.

CASE HISTORIES

Mrs. E. B., age 56, came in walking with a list to the affected side and complained of pain in her left back and left lateral thigh. She had had this recurrent pain for 18 months, and it was becoming worse. In April, 1952, I diagnosed her malady as a fasciitis with arthritis. X-ray revealed a marked straightening of the entire lumbar spine with an arthritic spur on the anterior superior surface of L 4, but with normal disc spaces throughout. There was some arthritic degeneration on the left sacro-iliac and to a lesser extent on the right. I advised that she wear an orthopedic corset and use bed boards, but her pains continued to recur.

There was little of note in her past medical history except for a cholecystectomy done for cholelithiasis 10 years previously. The examination showed a rather obese, white female, not acutely ill, but definitely suffering pain. There was nothing particularly significant found, except on her back, where there was a walnut-sized lipoma in the left sacro-iliac region and a small lipoma in the right. She had almost complete relief of pain for 1 hour following the administration of novocaine. So, in spite of x-ray evidence of arthritis, I felt confident that most of her pain would be gone following removal of the lipoma.

On operation, a one-inch-diameter lipoma was removed from the area over the left sacro-iliac joint. About 1 to 1½ inches lateral to the lipoma there was an opening in the fascia through which fat was protruding and which admitted the end of my index finger. This was closed with chromic. The patient was discharged on the third postoperative day, following an uneventful convalescence. I may state that this was the smallest of three hernias, the second one being a double oval opening a good 1 inch long and ¾ inch wide with a thin strip of tissue between the openings, and the other being a single oval opening. There was none of her original pain present when she left the hos-

pital, and on her return 6 weeks later, she said she was completely free of pain in her back.

Mrs. D. H., age 20, complained of pain in her left back of 3-4 months duration. Before coming to me, she had recently spent 10 days in the hospital for her backache with no relief. She stated it was gradual in onset and that she had had no injury. The pain remained on the left side of her back, but might radiate anteriorly and would occasionally hurt on coughing. On the left side, this patient had a definite thickness, and moderate tenderness, but no distinct mass. The pain was completely relieved after 8 cc. of novocaine were injected. A large walnut-sized lipoma was removed, and she was still free of pain when she returned 6 weeks later. No hernia was found.

Mr. A. H., age 41, had complained of pain on the right side of his back for over two years. The pain was aggravated by lying on his back and would also hurt him on sitting, bending, and lifting or crossing his legs. His past medical history and physical examination were essentially negative, except for his back. Approximately two inches lateral to the midline and on a level between the 4th and 5th lumbar vertebrae was an area definitely thickened, as compared with the left side, but there were no nodules. He experienced complete relief with novocaine block. Operation was done under local anesthetic. A fairly good sized lipoma was removed and a double-opening hernia was found, through which fatty tissue was protruding. The hernia was closed with chromic, and the skin approximated with dermal. This patient left the hospital on the third postoperative day, and at the time of dismissal he stated his back felt the best it had for months. On subsequent examinations the patient stated he was completely free of all back pain.

SUMMARY

Lipomas of the sacro-iliac region have been known for a long time as a cause of backache, but their significance, I feel, has not been adequately emphasized because, in a large percentage of these cases, we have failed to make the diagnosis if we were unable to find a nodule or nodules. I cannot positively say that pannicular hernias cause backache, but they should be looked for in each case of lipoma and adequately treated.

CHICAGO MEDICAL SOCIETY CONFERENCE

The Chicago Medical Society cordially invites M.D.'s from other states to attend its Annual Clinical Conference, at the Palmer House, March 2-5, inclusive. A faculty of 24 will present half-hour lectures, three of them constituting a symposium on hypertension. Color television direct from Cook County Hospital will be shown on a specially built screen measuring 4½ x 6 feet. The scientific exhibits, it is promised, will be new and deserving of real study.

A Fascial-Flap Repair of Inguinal Hernia

W. L. DOWNING, M.D.

AND

H. L. VANDER STOEP, M.D.

LE MARS

A SURGICAL TECHNIC that will assure a cure in all cases of inguinal hernia in the adult male has not yet been developed. While each surgeon has a favorite technic, he usually must modify his method to best utilize the available tissue. The McVay method of making a relaxing incision in the rectus fascia and suturing the conjoined tendon to Cooper's ligament instead of to the inguinal ligament represents a sound anatomical development. Zimmerman is of the opinion that the use of Cooper's ligament is not important, but he emphasizes the importance of restoring the floor of the inguinal canal by closing the defect in the transversalis fascia over a direct hernia and the closing of the defect in the same fascia beneath the cord at the internal ring in indirect hernias.

Since 1945, the authors have used a modified technic which turns down a flap of the internal oblique muscle and its aponeurosis and more medially the fused aponeurosis of the internal oblique and the transversus abdominus muscles. In more than 80 per cent of 130 operations on 125 adult male patients, this method has been used. In a recent review of these cases operated upon from 1946 to 1950, with 122 of the 125 patients reporting, we have been informed of only three recurrences.

ANATOMY

A brief review of the anatomy concerned in this method follows. The lower fibers of the internal oblique muscle, which originate from the inguinal ligament, arch about the cord at the internal ring and then become tendinous. This aponeurotic layer fuses with that of the transversus abdominus muscle, and the conjoined tendon results. More medially, this tendon inserts into the crest of the pubis. Below the semicircular line, the aponeuroses of all three lateral abdominal muscles fuse and pass in front of the rectus muscle as the anterior rectus sheath. The aponeurosis of the external oblique muscle does not fuse until it nearly reaches the mid line. It has been our experience that in about 80 per cent of cases of inguinal hernia in the male, the tendinous portion of the internal oblique, and, medially, the fused internal oblique and transversus abdominus aponeurosis provide a firm fascial layer which can be turned down and sutured to Cooper's ligament or to the inguinal ligament. In the other 20 per cent of cases, the muscle fibers continue medially to such an extent that no aponeurotic layer is available.

TECHNIC

A description of this aponeurotic-flap technic follows. The external oblique fascia is divided in the usual manner from the external ring at its superior margin parallel to its fibers to a point lateral to the internal ring. By blunt dissection, the superior flap is freed from the tendinous portion of the internal oblique down to the pubis. The spermatic cord is then elevated, the indirect sac, if present, is dissected out, and the sac is closed flush with the parietal peritoneum. The cremasteric muscle and all extraneous tissue are removed from the cord. In cases of direct hernia, the direct sac is exposed and either plicated or opened and closed flush with the parietal peritoneum. In direct hernia, the thinned-out transversalis fascia is then dissected out and sutured, to form a protecting layer over the repaired direct sac. In large indirect hernias, the defect in the transversalis fascia is also repaired beneath the cord. The upper margin of the transversalis fascia is sutured to its inferior margin, which, though thinned out, can almost always be found.

In securing a flap of the tendinous portion of the internal oblique, one starts an incision in the muscle fibers and more medially in the aponeurosis about two centimeters superior to the internal ring. This incision is continued medially in the aponeurosis at the same distance from the edge of the conjoined tendon in a curving fashion down to its pubic insertion. This flap, which is the fused aponeurosis of the internal oblique and transversus abdominus in its lower third, is then turned down beneath the retracted cord and is sutured to the lacunar (Gimbernats) ligament and to Cooper's ligament, or to the inguinal ligament. Cooper's ligament is the lateral continuation of the lacunar ligament and is a fibrous thickening on the pectineal line of the anterior pubic ramus. When Cooper's ligament is used and the femoral vessels are reached, the flap is sutured to the transversalis fascia anterior to the vessels and farther laterally to the inguinal ligament. The attached portion of the tendinous flap is still fused into the conjoined tendon. Thus without tension, a strong aponeurotic flap covers Hesselbach's triangle and covers all of the anatomically weak area from the internal ring to the pubis. This flap also turns the shelving edge of the internal oblique muscle beneath the cord, and the internal ring can be made as snug as the size of the cord permits. This results in a complete muscular ring encircling the cord at the internal

ring. In all of our cases, cotton sutures have been used in making the repair.

The fascial flap leaves an area superior to the conjoined tendon deprived of one layer of aponeurosis, but the wall is still strong, for the transversus abdominus muscle, the rectus muscle, the transversalis fascia and the peritoneum support this area. With no structure such as the cord passing through it, no weakness results. The cord is then replaced and the fascia of the external oblique is sutured, narrowing the external ring to the degree indicated in each case. As has been said, in about 20 per cent of cases, the fibers of the internal oblique continue medially to such an extent that no aponeurotic layer is available for forming a flap. In these patients some other technic is chosen. Usually the conjoined tendon is freed of all areolar tissue, and after a relaxing incision has been made in the rectus fascia (strictly speaking it is in the fused portion of the internal oblique and transversus abdominus aponeurosis), the conjoined tendon is sutured to Cooper's ligament. In many cases, the conjoined tendon is not a firm tendinous or fascial structure in a portion of its length, and a fascia-to-fascia suture is not possible. The suturing of the shelving edge of the internal oblique and transversus abdominus muscle fibers does not give a satisfactory type of repair.

The technic described, while in part similar, is not to be confused with the method of using a fascial flap turned down from the anterior rectus sheath. Only in its medial portion does it lie anterior to the rectus muscle. This fascial-flap method firmly covers the upper end of the femoral canal, thus preventing or curing a femoral hernia, if present. In one of our cases, both a femoral and a direct hernia were present, and they were repaired in this manner.

SUMMARY OF CASE REPORTS

Patients 125. Operations 130. Bilateral five.

Follow-up reports—122 patients.

Flap technique used—111 operations. Recurrences—3 operations.

Other technics used—19 operations. Recurrences 0.

Operations—

- 1946—Operations 24. Flap 20. No follow-up 1. Recurrences 1. Other methods—4 operations. No follow-up 0. Recurrences 0.
- 1947—Operations 19. Flap 16. No follow-up 0. Recurrences 0. Other methods—3 operations. No follow-up 0. Recurrences 0.
- 1948—Operations 38. Flap 33. No follow-up 0. Recurrences 1. Other methods—5 operations. No follow-up 0. Recurrences 0.
- 1949—Operations 26. Flap 22. No follow-up 1. Recurrences 0. Other methods—4 operations. No follow-up 0. Recurrences 0.
- 1950—Operations 23. Flap 20. No follow-up 0. Recurrences 1. Other methods—3 operations. No follow-up 0. Recurrences 0.

In a small series of hernia operations, statistics on the recurrence rate are not conclusive. However, when the flap technic has been used, one finishes the operation with the feeling that a sound repair has been obtained.

OMAHA MEETING OF ACS

An "extra large" four-day Sectional Meeting of the American College of Surgeons will be held at the Hotel Fontenelle, Omaha, March 1-4, 1954. The meeting is the third of six scheduled for this year in different parts of this country and Canada. All members of the medical profession are invited to attend.

On March 1, the morning session will consist of a panel discussion on the Treatment of Uterine Malignancy. There are to be two symposia during the afternoon of that day, one on Trauma, and the other on Pre- and Postoperative Care.

The program in ophthalmology planned for the first day includes a clinic in the morning and a symposium on Strabismus in the afternoon.

Obstetrics and gynecology, general surgery, otolaryngology and thoracic surgery will each have a program on the second day of the meeting. The obstetrics and gynecology sessions are to include a clinic from 8-10:30 a.m., followed by a panel discussion of Uterine Malignancy. In the afternoon, Bleeding During the First Trimester of Pregnancy will be discussed, and there will be a symposium on Management of Prolonged Labor.

At the March 2 program on general surgery, there will be a film on Pancreatic Cysts, papers on Herniation of Intervertebral Discs and the Relationship of Cigarettes to Cancer (by E. A. Graham, M.D., St. Louis) and a panel discussion on Jaundice. The afternoon session is to conclude with a symposium on Vascular Surgery.

Paul R. Hawley, M.D., is to address the dinner meeting on "The Responsibilities of Medical Citizenship," and a Cancer symposium will follow.

The otolaryngology program on March 2 will be a symposium on Management of Lesions of the Esophageal Junction.

The morning general-surgery program on March 3 will include two films, one on Surgical Treatment of Diverticulitis of the Sigmoid, and the other on Tendon Injuries. The afternoon program will be made up of papers on chest surgery. Films on Otoscopic Cinematography of the Tympanic Membrane and Middle Ear, the Surgical Residency, Intrahepatic Paraffinoma, and Abnormalities of the Extrahepatic Biliary Ductal System will be shown during the evening.

On the morning of March 3, as a sectional session on urology, a panel discussion of Surgery of Hydro-nephrosis will be conducted. An open discussion period will follow. During the afternoon, there are to be three panel discussions, on Surgery of the Adrenal, on Disposition of the Ureters in Radical Pelvic Surgery, and on Surgery of the Undescended Testis.

Programs on orthopedic surgery will be presented on two of the days.

There is to be a symposium on Congenital Defects in Children on the final afternoon of the meet-

(Continued on page 80)

Pathology of Peptic Ulcer*

F. C. COLEMAN, M.D.
DES MOINES

MAN IS THE ONLY creature peculiarly susceptible to peptic ulcer. Although gastric ulcers have been reported in dogs and cattle, such ulcers can usually be explained on a traumatic basis as due to the eating of coarse food. Peptic ulcer has also been reported in seals along the California coast. These ulcers are gastric ulcers caused by trauma from small sharp stones composed of black lava which are swallowed as an aid to digestion. These are regurgitated after the digestive process has been concluded, but the damage has been done.

Although peptic ulcers are more common in our fast moving modern civilization, they have apparently afflicted mankind since the days of antiquity. Many of the cases of so-called dyspepsia of an earlier day were undoubtedly peptic ulcer.

The term "peptic ulcer" was first used by Quincke in 1882. It is an appropriate name for such lesions because (1) the ulcers are located in those portions of the gastrointestinal tract exposed to the action of gastric juice, and (2) it is implied that the ulcers are caused by the peptic or digestive activity of the gastric juice.

The classic description of peptic ulcer is that given by Cruveilhier a hundred years ago: "Anatomically considered, the simple chronic ulcer of the stomach consists of a spontaneous loss of substance, ordinarily circular, with the margins cut perpendicularly, the bottom gashed and thick and of variable dimensions. Almost always single, the ulcer is situated most commonly on the small curvature or upon the posterior wall of the stomach. Sometimes it invades the pylorus, and then it takes the form of a circular zone. Its advance is slow and progressive, it spreads out on the surface, but especially it excavates deeply, and if helpful adhesions do not oppose, sooner or later the stomach is perforated and the contents are scattered throughout the peritoneal cavity."

Before considering ulcers further, let us review briefly the anatomy of the upper gastrointestinal tract. As you know, the esophagus is lined by a mucosa consisting of stratified squamous epithelium. This epithelium lies on a thin muscular layer known as the muscularis mucosae. Beneath it is a loose submucosa and beneath it is a muscular coat. The stomach is lined by a mucosa containing numerous gastric glands and the stomach has a muscularis mucosae, a submucosa and a muscular portion. Outside this muscle is an outer covering called the serosa. The duodenum and the jejunum

have essentially the same anatomical structure as that of the stomach.

There are many definitions of the word "ulcer." One of these is by Karsner. He states, "An ulcer may be defined as an interruption of surface continuity with an inflammatory base." With this definition in mind, we will review the ulcerative lesions of the upper gastrointestinal tract.

The simplest of these is a superficial lesion of the gastric mucosa. In the past, such lesions have frequently been called superficial ulcers. They heal rapidly and very seldom have an inflammatory base. The term "erosion" is proposed for lesions of this type. "Ulcer" would be used to describe the more severe or deeper lesions that extend through the mucosa, muscularis mucosae and down into the submucosa. Ulcers that remain only a short time and heal rapidly are known as "acute ulcers" and those that remain for a long period of time are known as "chronic ulcers."

Though experimental work on the etiology of peptic ulcer has been carried on for over a century, the etiology is still unknown. Peptic ulcers have been produced repeatedly in experimental animals. In fact, more than 100 different methods have been used to produce such ulcers. Such methods include: (1) injury to certain portions of the central nervous system; (2) administration of hormones; (3) production of vitamin deficiency; (4) injection of drugs and toxins; (5) section of nerves; and (6) anatomical alterations of the gastrointestinal tract.

Such ulcers somewhat resemble the ulcers occurring in man and are of both the acute and chronic variety. Changes in these experimental animals are thought to parallel closely the changes occurring in man. Ulcers begin as superficial erosions due to a combination of necrosis and interstitial hemorrhage. Such necrosis and hemorrhage is due to a disturbance of the vascular and nerve supply of that portion of the gastrointestinal tract. If the erosion does not heal rapidly, it may become an acute ulcer, and if the acute ulcer does not heal rapidly, it may become a chronic ulcer. Thus in man, just as in experimental animals, ulcers begin as erosions and may progress to chronic ulcers. These changes in the vascular and nerve supply are not thoroughly understood. We do know, however, that patients with chronic peptic ulcer secrete more gastric juice with a higher acid content than does the normal individual. The pepsin output in the stomach of these patients is also increased, and the mucin secretion of the gastric mucosa is decreased. The contents of the first portion of the duodenum are also more acid in patients with duodenal ulcer than in normal individuals.

* Presented as a part of "A Symposium on Peptic Ulcer" at the Iowa-Nebraska Medical Assembly, Council Bluffs, Iowa, September 22, 1953.



Fig. 1. Chronic ulcer of the duodenum with posterior perforation into the pancreas.

Studies on the incidence of peptic ulcer in civilized countries of the world indicate that between 5 and 10 per cent of the population develop a peptic ulcer sometime during their lifetime. At a given time, between 1 and 3 per cent of the population of the United States over the age of 20 years have peptic ulcers. The incidence of peptic ulcer based on admissions to medical institutions is considerably higher. This is to be expected, because such people are seeking medical care for a real or fancied illness. Eusterman and Balfour found a peptic ulcer in 14 per cent of approximately 16,000 x-ray examinations at the Mayo Clinic. Clinical studies, as well as studies based on autopsy and surgical material, indicate that peptic ulcers occur approximately three times as commonly in the male as in the female. This is true for both gastric ulcers and duodenal ulcers. The relative incidence of gastric ulcers as compared to duodenal ulcers is controversial. Clinical studies indicate that duodenal ulcers are approximately six times as common as gastric ulcers. Studies based on autopsy material, on the other hand, indicate that gastric ulcers are as common as duodenal ulcers. The difference seems to lie in the fact that gastric ulcers produce symptoms that are frequently not so severe as those of duodenal ulcers, and they are more difficult to demonstrate by x-ray examination. Many gastric ulcers, therefore, go unrecognized.

Peptic ulcers may occur at any age, but are most common between the ages of 30 and 50 years. Duodenal ulcers are usually seen by a physician in patients between the ages of 30 and 39 years. The average age of such patients is approximately 32 years. Patients with gastric ulcer, on the other hand, are usually between the ages of 40 and 49 years, with an average age of approximately 42 years. Thus gastric ulcers occur in an age group that is ten years older. Peptic ulcer may occur in infants and children. When such ulcers are present, however, they are usually associated with some other disease. These diseases are usually serious and the following are examples: (1) lesions of the central nervous system such as brain tumor, hydrocephalus, poliomyelitis or meningitis; (2)

malnutrition; (3) infections, such as purulent otitis media, septicemia or pneumonia; (4) extensive burns.

Acute ulcers may occur in the aged, but they also are likely to be associated with some other disease process. Most of the ulcers observed in elderly patients are chronic ulcers that have been present for a long time.

There is no significant variation in the racial incidence except as the racial incidence may be affected by the degree of civilization of the race. Poorly civilized races have a low incidence of ulcer and highly civilized races have a higher incidence.

The effects of emotion and nervous tension have been studied extensively. During the bombing raids of World War II, countries such as England and Germany that were subjected to repeated raids had a higher incidence of ulcer than existed prior to the war. Observations on American troops being sent overseas to combat duty also indicated that as many as 15 per cent developed acute peptic ulcers. Some interesting data on the relationship of marital status to peptic ulcer has been developed. Marital status does not seem to influence the incidence of peptic ulcer among females. Among males, however, divorced men have a higher incidence of both gastric and duodenal ulcer. The death rate from peptic ulcer is also higher among divorced men than among married men.

Peptic ulcers may be observed in the esophagus, stomach, duodenum, jejunum or in heterotopic gastric tissue. Esophageal ulcers usually occur in the lower third of the esophagus, and most of them are located in the distal 3 cm. of the esophagus. Most esophageal ulcers are acute ulcers, and they cause acute symptoms. On institution of treatment, most ulcers heal rapidly so that chronic ulcers of the esophagus are a rarity. Approximately 85 per cent of gastric ulcers are located either on or near the lesser curvature. Such ulcers along the lesser curvature are located either in the prepyloric region or in the region of the incisura angularis. Most of those in the prepyloric region are located within 6 cm. of the pyloric ring. Gastric ulcers are located on the



Fig. 2. Multiple peptic ulcers with an acute gastric ulcer and chronic duodenal ulcers.

anterior wall of the stomach a little more frequently than they are on the posterior wall. Acute gastric ulcers are usually multiple. The lesser curvature is the main pathway or magenstrasse for the passage of food through the stomach. Trauma due to the passage of food along this pathway is thought to be one of the factors responsible for the development of an acute peptic ulcer.



Fig. 3. Photomicrograph of acute erosion of the esophagus following severe burns. Note the intact muscularis mucosae.

There are other factors responsible for the development of peptic ulcers along the lesser curvature. (1) The lesser curvature has a relatively poorer blood supply than the remainder of the stomach. (2) There is increased motility of the lesser curvature of the stomach. (3) There is an increased nerve supply from the vagus nerve along the lesser curvature. (4) The lesser curvature seems to be more susceptible to external mechanical injury.

Duodenal ulcers are usually located in the first portion of the duodenum, most of them within the first 3 cm. of the duodenum. There is approximately equal distribution of these duodenal ulcers on the anterior and posterior walls. Ulcers develop in the proximal portion of the duodenum because of the relatively poor blood supply and because the contact with acid chyme from the stomach is greatest at this point.

Peptic ulcers which develop following gastroenterostomy may be located at the anastomotic site or in the jejunum. Those within the jejunum usually occur within 3 cm. of the anastomotic site. Peptic ulcers developing in heterotopic gastric mucosa are observed most frequently in Meckel's diverticulum. These lesions are usually observed in children. Bleeding from them is one of the causes of gastrointestinal bleeding in childhood.

There seems to be little or no correlation between the size of a peptic ulcer and its age. Eighty-five per cent of gastric ulcers are less than 2.5 cm. in diameter. Duodenal ulcers are usually smaller than gastric ulcers. Those located on the

posterior wall tend to be larger than those on the anterior wall. Duodenal ulcers are much more likely to be multiple than gastric ulcers, and between 15 and 20 per cent of chronic duodenal ulcers are multiple. Between 5 and 10 per cent of patients with peptic ulcer will have both a gastric ulcer and a duodenal ulcer.

The gross appearance of peptic ulcer is essentially the same, whether the ulcer is located in the esophagus, stomach or duodenum. Acute ulcers occur as shallow, punched out areas with a fiery red base. Microscopically, such acute ulcers are covered with a layer of fibrinous exudate which rests upon necrotic tissue and an acute inflammatory base. Chronic peptic ulcers are usually round, punched-out ulcerations with a straight wall, as if a round metal punch had been used to produce them. Usually there is no undermining of the edges of the ulcer. The base of the ulcer is red and is usually covered by a layer of fibrinous exudate. Beneath the fibrinous exudate is an inflammatory zone, and beneath the inflammatory zone is a zone of scar tissue. Such scar tissue may replace the muscular coats of the wall of the organ. Acute and chronic ulcers heal in essentially the same way. Healing of an ulcer occurs by the extension inward of granulation tissue from the margins of the ulcer. This granulation tissue is eventually converted into scar tissue. Epithelium from the mucosa around the margins of the ulcer extends inward so that the scar tissue is covered with epithelium. Ulcers of 1.5 cm. or less in diameter heal rapidly. Large ulcers heal much more slowly, and if the ulcer is larger than 3 cm. in diameter, there is considerable difficulty in epithelialization. Acute ulcers usually heal in approximately four weeks. Ulcers of the stomach heal more quickly than do ulcers of the duodenum. Chronic ulcers require longer to heal even under optimum conditions. The average time required for healing of a chronic ulcer is somewhere between 40 and 60 days under good medical management.

The term "active ulcer" is frequently applied to a peptic ulcer patient who is having symptoms. There is a reasonably good correlation between the symptoms of such patients and the gross and microscopic appearance of the ulcer. Patients with active symptoms usually give evidence of activity grossly and microscopically. The term "penetrating ulcer" is frequently used to indicate those ulcers that are unusually deep. This depth means that the ulcer has extended through or almost through the wall of the organ. Such ulcers are the ones that are likely to perforate.

Complications of peptic ulcer include gastrointestinal bleeding, perforation, obstruction with gastric retention, electrolyte disturbances and malignant change. Hemorrhage is the most frequent complication. Approximately 25 per cent of patients with gastric ulcer will develop bleeding, and such bleeding is more likely to occur in acute ulcers

than in chronic ulcers. Blood vessels in chronic ulcers are usually thrombosed, or if not thrombosed, show marked scarring of their walls. This is not the case in acute ulcer. Approximately 7.5 per cent of the patients who develop bleeding as a complication of peptic ulcer die from the hemorrhage. An ulcer appearing late in life is more prone to bleed than one appearing early in life. Bleeding peptic ulcer in an older individual is also more hazardous than a bleeding peptic ulcer in a young individual. The mortality rate in patients under the age of 40 with bleeding peptic ulcer is 4 per cent or less. In patients above the age of 50 years, it is 15 per cent. Patients with hypertension have a higher mortality rate. Perforation occurs much more frequently in patients with ulcer of the duodenum. Those patients with ulcers located on the anterior wall of the duodenum are more likely to perforate. These ulcers that perforate are so-called "penetrating ulcers." Perforation may occur into the peritoneal cavity or into other organs such as the gallbladder, liver or pancreas. Repeated perforation occurs in approximately 1 per cent of patients. Approximately 6 per cent of patients with perforation also develop gastrointestinal bleeding at the same time. Obstruction with gastric retention is a complication of peptic ulcer which is most likely to follow chronic duodenal ulcer. Such patients usually give a history of peptic ulcer for some 15 to 20 years. Gastric retention results in severe nutrition problems. Electrolyte disturbances may occur as a complication of peptic ulcer because of excessive intake of alkali, because of nausea and vomiting, or because of gastric retention.

A controversial subject is the relationship of peptic ulcer to cancer of the stomach. Undoubtedly such malignant degeneration of gastric ulcer does occur. It is estimated, however, that 5 per cent or less of gastric ulcers become malignant. Studies on autopsy and surgical material have shown that most malignant ulcers of the stomach are located along the greater curvature. These are frequently larger than peptic ulcers when they are first detected. Thus any ulcer along the greater curvature must be viewed with suspicion and any ulcer more than 3 cm. in diameter must be viewed with suspicion. In our series, however, we have examples of benign ulcers located along the greater curvature and malignant ulcers along the lesser curvature. Duodenal ulcers do not become malignant.

No effort will be made to review the symptoms of ulcer except to state that pain, which is the most common symptom of ulcer, is due to the action of the acid of the gastric secretion on nerves in the ulcer crater. Factors of gastric motility may be of secondary importance.

In conclusion, I would like to refer to something that is often disturbing to the gastric surgeons in our hospital. This is the frequent inability of the pathologist to demonstrate an ulcer in a stomach



Fig. 4. Malignant ulcer (adenocarcinoma) of the stomach located on lesser curvature.

specimen that has been removed in the surgical treatment of peptic ulcer. A survey of our records indicates that approximately 50 per cent of such specimens show no ulcer. The failure of the pathologist to find an ulcer is in no way a reflection upon the surgeon. In fact, it is in many instances a compliment to the judgment of the surgeon. Blow-outs of the duodenal stump are due in some cases to the enthusiasm of the surgeon in removing so much duodenum that he has an inadequate amount of tissue for a good closure. As soon as the passage of food through the duodenum ceases following such an operation, the duodenal ulcer usually heals.

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OASI AND THE PHYSICIAN

An editorial in the New York State Journal of Medicine for January 15, 1954, points out that the average retirement age of physicians is 74. The retirement age of lawyers, dentists and farmers is probably about the same. Under the so-called work rule of the Old Age and Survivors' insurance system, no eligible person can draw a pension if he earns \$75 a month between ages 65 and 75. This means that if Congress were to force coverage upon these self-employed groups, exactly half would draw no benefits and would, indeed, be required to pay social-security taxes nine years longer than other people.

State University of Iowa College of Medicine

Clinical Pathologic Conference

November 11, 1953

SUMMARY OF CLINICAL FINDINGS

A 10-HOUR-OLD white male was admitted to the Pediatric Service and expired approximately one hour after admission. As far as is known, the pregnancy was uncomplicated, and the delivery, using saddle block anesthesia, was uneventful. The infant cried spontaneously immediately after birth.

Three hours after birth, a nurse observed that the baby's respirations were slow and irregular. The attending physician was notified, examined the infant, obtained an x-ray film of his chest, noted a right diaphragmatic hernia and then referred him to SUI hospitals.

During the trip to Iowa City, the patient's condition became progressively worse, and oxygen was administered by mask. At the time of admission to SUI hospitals, the patient was unresponsive and moderately cyanotic. Respirations were sporadic and approximately 4 per minute. Pulse rate was 40 per minute. There was dullness to percussion over the right chest, and the heart was shifted to the left.

Oxygen was administered by mask, and artificial respiration was given. Wangensteen suction was instituted, and a surgical consultant was summoned. The baby expired one hour after admission.

An eight-day-old baby girl was admitted to the Pediatric Service on January 22, 1953, and expired a few hours thereafter. The patient was the product of an uncomplicated full-term pregnancy and uneventful delivery. The baby cried spontaneously immediately after birth.

Excessive salivation was noted shortly after birth. With the first feeding by mouth, the infant took approximately one ounce of formula and immediately regurgitated it. Attempts to feed the infant by mouth were continued for the following week, but each feeding was regurgitated. There is no recorded history of coughing, choking, or cyanosis with or without feedings; however, the baby was kept in an incubator and given oxygen. During this period of time, the infant received intravenous fluids—type and amounts unknown.

On the eighth day of life, x-ray studies were done, and the patient was referred to SUI hospitals.

Physical examination revealed an eight-day-old, moderately dehydrated female. Respirations were 90 per minute, with poor respiratory excursions. She had moderate cyanosis and a feeble cry. On auscultation, numerous loud rales were heard throughout the lung fields. The abdomen was markedly distended, and breath sounds were audible on auscultation over the abdomen. There was

excessive flatus, and the baby passed a greenish stool. The remainder of the physical examination was essentially non-contributory.

The infant was placed in an incubator with oxygen. She was given penicillin and streptomycin intramuscularly. A cut-down was performed, and fluids were given intravenously.

Laboratory studies: The blood studies showed hemoglobin 9.5 gm. per 100 ml. of blood, a red blood count of 2.95 M. per cu. mm., and a white blood cell count of 11,700 per cu. mm.

Appropriate x-ray studies were done, and a surgical consultation was held but the patient's condition became progressively worse, and she expired approximately six hours after admission to the hospital.

CLINICAL DISCUSSION

Dr. MacQueen: The referring physician obtained roentgenograms of the 10-hour-old boy, and these accompanied the patient at the time of admission. Because they were returned to the referring physician, they are not available. We do have a post-mortem roentgenogram. Dr. Forbes, would you please describe the findings?

Dr. Stephen A. Forbes, Radiology: The post-mortem films of the chest show a large portion of the gastro-intestinal tract in the right hemi-thorax with herniation to the left of the mid-line.

Dr. Frederic W. Stamler, Pathology: This infant was found to have a large defect in the right portion of the diaphragm with herniation of almost the entire small intestine and about the proximal one-half of the large intestine into the thoracic cavity, with a consequent extreme shift of the mediastinal structures to the left, and almost complete collapse of both lungs. The hernial contents were very easily reduced. They passed into the abdominal cavity very easily through this defect. There were also several minor congenital anomalies—an undescended right testis and some ectopic thymic tissue associated with the thyroid gland and the parathyroids.

One of our photographs shows herniation of the abdominal structures into the thoracic cavity, the colon filled with meconium, and the loops of small bowel apparently containing a moderate amount of gas. The dark color is not due to gangrene; it is simply evidence that the bowel contained meconium. One can see the same thing in the portion of bowel in the abdominal cavity. The color of the small intestine is quite good. The heart is shifted to the left very much. Another picture shows the very extensive collapse of the lungs as seen after the reduction of the herniated intestines.

Dr. Charles D. May, Pediatrics: I'd like to ask if those loops of very dark bowel were full of blood?

Dr. Stamler: They were not described as being bloody. There was a small amount of blood in the stomach, but the prosector described the entire portion of the herniated bowel as having good color, with no evidence of strangulation or infarction. It reduced very easily. The color apparently is due solely to the meconium that was contained in the large bowel.

SUMMARY OF NECROPSY FINDINGS

At necropsy, a 3.5 x 2 cm. defect of the posterior-medial portions of the right crus of the diaphragm was found, with herniation of almost the entire small intestine and the proximal one-half of the large intestine into the right thoracic cavity. There was a consequent extreme shift of the mediastinal structures to the left, and almost complete atelectasis of both lungs. An intra-abdominal right testis and ectopic thymic tissue in relation to the thyroid and parathyroid glands were present as further evidence of faulty embryological development.

Death was due to mechanical pulmonary insufficiency.

NECROPSY DIAGNOSES

Congenital diaphragmatic defect, right, with herniation of small and large intestine into right thoracic space.

Pulmonary atelectasis, bilateral.

Undescended right testis.

Ectopic thymic tissue, associated with thyroid and parathyroid glands.

Dr. MacQueen: If you will remember the clinical history, we will proceed to the second case.

Dr. Forbes: Fluoroscopic examination of the esophagus following the introduction of iodized oil into the upper esophagus and films taken during the examination show that the catheter and the oil both stop at the level of the second rib posteriorly.

The catheter could not be passed below this point, and the oil terminated in a blind pouch. However, dilatation of the stomach and distention of the small intestine with gas led to the conclusion that there was a communication between the lower part of the esophagus and some portion of the bronchial tree. Films of the chest following fluoroscopy and removal of the catheter demonstrated a trace of oil in the blind pouch of the upper esophagus.

An area of consolidation involving the right upper lobe was seen as well, and was interpreted as representing a pneumonia.

The conclusion from the x-ray examination was that the baby had esophageal atresia, an esophageal-tracheal fistula, and also right upper-lobe pneumonia.

Dr. Stamler: The infant did have the condition diagnosed and, in addition, a very extensive pneumonia with pulmonary edema and massive hemorrhage.

The probe inserted through the trachea

passed through the fistulous communication with the esophagus. There was an upper pouch and, beyond that, an apparent continuation of the esophagus, grossly, a cord-like structure, quite firm, in which no lumen could be demonstrated by probing.

There was complete atresia of the esophagus in this latter area, with fistulous communication between the lower portion of the esophagus and the trachea just above the bifurcation of the trachea. The lungs were very heavy, there were diffuse areas of hemorrhage, consolidation and edema, and there was very little functioning, aerating lung tissue remaining. There were many foci of necrotizing pneumonia scattered throughout. All portions of both lungs were involved, the right lung more than the left. We usually consider pneumonia in such cases as this to be at least partially the result of the aspiration of foreign material into the tracheal-bronchial system. Such was probably the situation here, although I could demonstrate very little such material. There were small amounts of debris which may have been either aspirated formula or aspirated gastric contents.

SUMMARY OF NECROPSY FINDINGS

A tracheo-esophageal fistula was found, with the fistulous connection one centimeter above the bifurcation of the trachea. The upper portion of the esophagus ended blindly above this point, but was connected by a dense cord-like segment to the lower portion, which communicated freely with the trachea. Both lungs showed extensive congestion, hemorrhagic effusion, and patchy pneumonia. Small amounts of aspirated material were found in some of the pneumonic foci.

There was mild hepatic fatty metamorphosis. Death was due to pneumonia of aspiration type.

NECROPSY DIAGNOSES

Tracheo-esophageal fistula.

Pulmonary congestion, hemorrhagic edema, and extensive acute pneumonitis.

Fatty metamorphosis, liver, mild.

Dr. MacQueen: Are there any questions at this time? Because, as is apparent, we are concerning ourselves with congenital anomalies that occur in the new-born period, we have requested Dr. Davies, of the Department of Anatomy, to discuss the subject.

Dr. Jack Davies, Anatomy: It is possible to surmise how congenital defects of this type have arisen only by interpreting them in the light of the known facts of human development. Such conditions are only rarely discovered in small embryos, chiefly I think because people have neither the time nor the interest to search for them. I should like gratefully to acknowledge the loan of valuable slides from the collection of Dr. W. O. Nelson, of the Department of Anatomy, from which my illustrations have been taken.

To understand the tracheo-esophageal fistula, we

have to go back in all probability to a very early stage, certainly not later than the end of the fourth week of development. At this stage, the trachea is a short tube continuous cranially with a linear groove in the ventral wall of the pharynx. The latter is known as the "tracheo-esophageal groove" and is illustrated in Figure 1. In still earlier stages the trachea is known to arise as a ventral groove in the anterior wall of the primitive pharynx, and only in later stages does it show independent growth caudally. The manner of separation of the tracheo-esophageal groove from the pharynx is in some doubt. It has been interpreted as occurring either by the development of a constriction dorsal to the groove (Figure 2) or by the formation of lateral ridges which then fuse medially to form a "tracheo-esophageal septum." Whatever the method of separation of the trachea from the parent tube, it is certain that such a process lends itself to many aberrations. The separation may be incomplete or may take place sporadically at separate points, giving rise to a multiplicity of abnormal connections. In this way a tracheo-esophageal fistula may develop.

Another point of interest in the development of the trachea is the observation that in the process of separation of the trachea from the esophagus, the parent tube (in this case the esophagus) tends to become reduced in diameter and may undergo a normal occlusion or atresia (Figure 3). Failure of subsequent recanalization results in atresia of the esophagus, a defect which is commonly found in conjunction with a tracheo-esophageal fistula.

We may now consider the possible genesis of a diaphragmatic hernia. During normal development, there is a connection between the pleural cavity and the general peritoneal cavity which is known as the "pleuro-peritoneal canal." It is illustrated in figures 4 and 5 from a human embryo of about

five or six weeks. The opening at this stage lies posteriorly in the primitive diaphragm and also medially in relation to the dorsal surface of the adrenal gland, which is always very large in the human embryo. This is, in general, the position in which a hiatus may be found in the adult, with or without a diaphragmatic hernia. Closure of the "pleuro-peritoneal canal" takes place around the sixth or seventh week, when the muscle fibers in the surrounding diaphragm spread out from the point of insertion of the phrenic nerve into the diaphragm (Figure 5). The closure is facilitated on the right by the great bulk of the liver and the adrenal. On the left side the liver is small, and the stomach is intimately related to the pleuro-peritoneal opening (figures 5 and 6). This circumstance may explain why diaphragmatic hernias are more commonly seen on the left than on the right side. It is impossible, of course, to determine exactly when and how a diaphragmatic hernia may develop. Some of them are said to be associated with a congenitally short esophagus, so that as growth of the fetal body takes place, the stomach and associated viscera are dragged bodily through the pleuro-peritoneal opening.

Dr. Johann L. Ehrenhaft, Thoracic Surgery: There are many congenital anomalies in newborns, the recognition and treatment of which are of the utmost urgency. Both of the children presented died of respiratory difficulty, the first one because of pneumonia associated with a tracheo-esophageal fistula and atresia of the esophagus, and the other child because of acute anoxia. We at the University of Iowa have seen many cases of tracheo-esophageal fistulae with atresia of the esophagus and all of the different clinical variations. The first one ever successfully operated on was in 1939, by Dr. Leven. At that time the tracheo-esophageal fistula was ligated, a gastrostomy was established

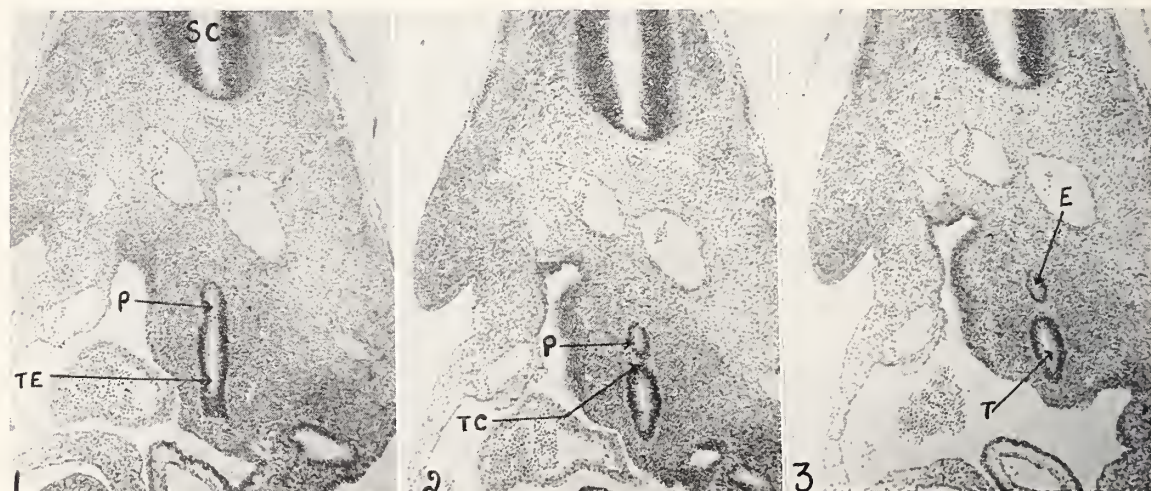


Fig. 1. Transverse section of a human embryo about the fourth week. Note the keel-like "tracheo-esophageal" groove in the ventral wall of the pharynx. (P. pharynx; SC. spinal cord; TE. "tracheo-esophageal" groove.) Fig. 2. Section of the same embryo as in previous figure at a slightly more caudal level. The trachea is becoming pinched off from the pharynx by the formation of a constriction. (P. pharynx; TC. tracheal constriction—"tracheo-esophageal septum.") Fig. 3. Same embryo as in previous figures at a still further caudal level. The trachea is an independent tube at this level. Note the small size of the esophagus which may undergo atresia at this level during normal development with subsequent recanalization. (E. esophagus; T. trachea.)

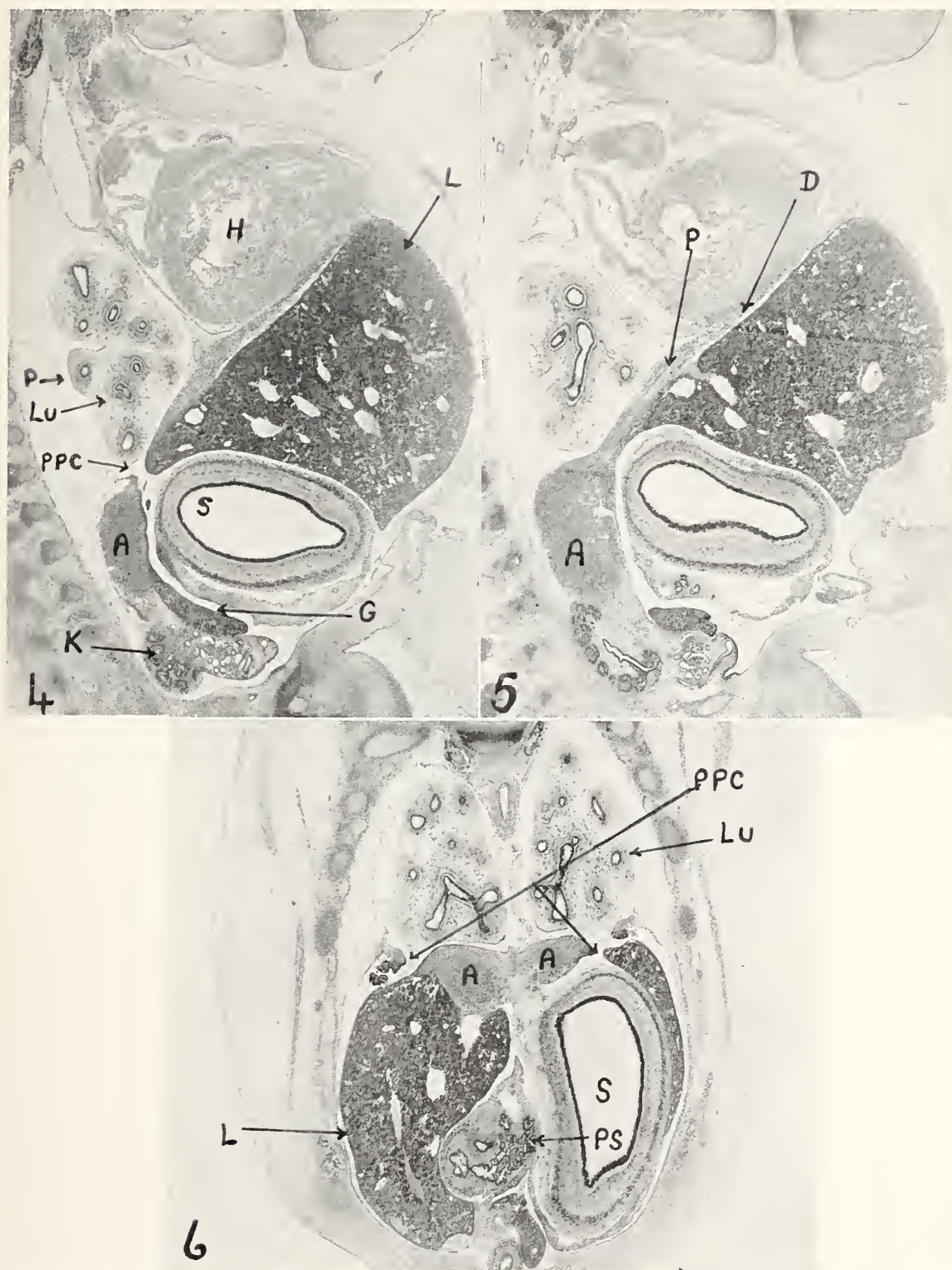


Fig. 4. Sagittal section of a human embryo at the fifth or sixth week. Note the small defect in the primitive diaphragm which connects the pleural cavity with peritoneal cavity. This is a normal "pleuro-peritoneal canal" which soon becomes closed after this stage by the formation of muscle in the surrounding diaphragm. (A. adrenal gland; G. gonad; H. heart; K. kidney; L. liver; Lu. lung; P. pleural cavity; PPC. pleuroperitoneal canal; S. stomach.) Fig. 5. Section of same embryo as in previous figure slightly more toward the mid-line showing that the pleuro-peritoneal opening is small and is in fact not present at this level. Note the phrenic nerve in the diaphragm. (A. adrenal; D. diaphragm; P. phrenic nerve.) Fig. 6. Coronal section of human embryo at a slightly more advanced age than that illustrated in figs. 5 and 6. The defect in the diaphragm is again illustrated. Note the proximity of the large adrenal and liver to the right pleuro-peritoneal opening. On the left side the stomach is directly related to the opening, the liver being inconspicuous on this side. (A. adrenal; L. liver; Lu. lung; PPC. pleuro-peritoneal canal; PS. pancreas; S. stomach.)

for feeding purposes, and the upper blind esophageal pouch was marsupialized on the left side of the neck to permit saliva to escape, rather than to spill into the tracheo-bronchial tree. This type of operative procedure necessitated extensive reconstructive surgery at a later date and construction of multiple stages of an antethoracic esophagus by skin tubes, small bowel, or other means. Of course those multiple stage operative procedures are not too successful and carry a very high mortality. In 1941, Dr. Cameron Haight was the first surgeon successfully to repair a tracheo-esophageal fistula and atresia of the esophagus by a primary end-to-end anastomosis of the esophageal segments. The approach was extrapleural. During the last few years we have abandoned the extrapleural approach and use the direct transpleural approach on those infants.

There are many different variations to this congenital anomaly, and they are illustrated in these slides. The child under discussion had the usual type of anatomical anomaly with a proximal esophageal pouch and the distal esophagus attached to the trachea about the level of the carina. This type constitutes about 95 per cent of the patients seen with this congenital defect. One may have communications of the proximal pouch with the trachea; one may have a proximal esophageal pouch with no communication of the distal esophagus with the respiratory tract. In this latter instance there is no air in the gastro-intestinal tract below the level of the diaphragm.

The overall mortality in most of the hospitals in this country is about 50 per cent. Ours certainly has been that. The reason for the high mortality rate is the late diagnosis, with often repeated attempts at feeding before the diagnosis is established, resulting in aspiration pneumonia. Many times the giving of barium instead of lipiodol to outline the proximal esophageal pouch during the establishment of the x-ray diagnosis is the cause of death. It is fairly easy to make this diagnosis clinically. Regurgitation of the first feeding should make one suspicious immediately. If a small catheter inserted into the pharynx and upper esophagus meets obstruction, the diagnosis is fairly certain. It can then be further verified by insertion of a few drops of lipiodol into the proximal esophageal pouch to outline it. But one should never use barium for this purpose.

Many of the children have other associated anomalies, some of which are not compatible with life. The most common associated anomalies are congenital heart disease, malformations of the anus and rectum, other areas of atresia along the gastro-intestinal tract, renal anomalies and many others. Newborns seen with this defect are not true emergencies, but the establishment of a definite diagnosis and the institution of surgical therapy is urgent and should be carried out as soon as the child is in an adequate general condition and in an adequate state of hydration. Many times those

infants have extensive aspiration pneumonia or atelectasis which are probably partly due to aspiration from the proximal esophageal pouch and also partly due to reflux of gastric juice into the trachea and lungs.

The second patient presented, a child with a diaphragmatic hernia, died of acute anoxia. This type of congenital defect is less frequent in occurrence than the one previously discussed. As you can see, this child came here and died within ten minutes after admission. Undoubtedly, the viscera had been displaced into the thoracic cage during intrauterine life. As soon as the child was born, it inhaled and swallowed air; and, as it swallowed air, the gastro-intestinal tract became distended. Part of the gastro-intestinal tract lies in the abdomen and part of it lies in the chest, either on the left or right side, but more commonly on the left. The more severe the distention of the intestinal tract becomes, the more the viscera will displace the mediastinum, compress the lungs, and displace the heart to either side. The children rapidly die of anoxia or occasionally of intestinal obstruction. This type of congenital anomaly, if recognized, is a true emergency. Most of the congenital diaphragmatic defects are due to anomalous development along the pleural-peritoneal canal. The surgical approach for correction may be abdominal or transthoracic. We have used both. In the instance of the patient presented, it would have been more advantageous to approach the diaphragmatic hernia abdominally through a subcostal incision, and possibly combine it with a thoracic incision if one should become necessary. It is very difficult to reduce the distended bowel through a small rent in the diaphragm if one approaches it transthoracically alone, particularly if the intestines have forfeited their right of domain in the abdominal cavity.

Dr. MacQueen: The patient who was born with a tracheo-esophageal fistula was recorded to have appeared normal at the time of birth. This is not unusual, for the congenital anomaly is compatible with intrauterine life. "Excessive saliva" was noted soon after birth. As an observation made concerning a newborn infant, this may sound trivial, but in reality its importance cannot be overestimated. The inability to swallow saliva was the first sign of the infant's anatomical inadequacy. This aspect of the anomaly results in a continuous threat of aspiration of pharyngeal contents. The signs of respiratory difficulty become apparent. These signs may be caused from any one of several complications that may attend the anatomical anomaly. There may be an aspiration pneumonia from pharyngeal contents; there may be a pneumonitis caused by the regurgitation of gastric contents into the bronchial tree; or there may be severe intestinal distention as air from the trachea passes into the lower esophageal segment. The first feeding was given, but immediate regurgitation resulted and respiratory difficulties increased. Many an infant with tracheo-esophageal

phageal fistula progresses to the point of the first feeding without those caring for him recognizing the importance of the findings we have just discussed. At the time of this feeding, the signs of absolute obstruction are seldom missed. This is the usual sequence of clinical signs that occur in the child with tracheo-esophageal fistula.

Not only must we as physicians be aware of the importance of these minor variations in the performance of newborn infants, but we must alert the nurses working with us in the maternity nurseries to be competent observers and conscientious reporters.

From the above remarks it is apparent that the life of these infants is threatened by starvation, by regurgitation of gastric contents in the lung, by aspiration of pharyngeal contents, and by pneumonia. Starvation may be avoided by parenteral feedings. Spillage of gastric contents may be diminished by placing the infant in a semi-upright position. Aspiration of pharyngeal contents may be avoided by constant pharyngeal suction. Pneumonia may be treated by the use of appropriate antibiotics. It is desirable to use these forms of therapy to obtain an optimal state of health prior to surgery. This therapy can be carried out with speed and yet without haste.

It must be mentioned that approximately 33½ per cent of babies born with tracheo-esophageal fistulae have other congenital anomalies. These anomalies may vary from congenital heart disease to anula pancreata. Approximately 10 per cent of such infants have an imperforate anus. The concomitant instance of these two anomalies is sufficiently high to make it desirable to test any child born with an imperforate anus for a tracheo-esophageal fistula. These accompanying congenital anomalies present additional threats to these infants' lives and increase the surgical risk.

The greatest single factor unfavorably influencing the successful surgical correction of the anomaly is prematurity. A breakdown of the mortality figures, quoted by Dr. Ehrenhaft, would reveal that the majority of deaths occurred in premature infants.

We have listed and discussed some of the natural hazards that face these infants. For emphasis, we must discuss an artificial hazard. This hazard is the use of barium for the radiological examination of such patients. An unfortunate group of patients with tracheo-esophageal fistulae admitted to this hospital have had pneumonitis thrust upon them as a result of swallowing barium.

I would like to have Dr. Ehrenhaft discuss the follow-up results of children who have had the repair of their tracheo-esophageal fistulae in this hospital.

Dr. Ehrenhaft: I believe our oldest child successfully operated on for a tracheo-esophageal fistula dates back to the spring of 1946. This child is alive and well. Surgery has been performed on

35 to 40 children, with an overall mortality of somewhere between 45 per cent and 50 per cent. As I have mentioned previously, the results depend on early diagnosis, and they will be modified by the absence of other serious congenital defects. Prematurity and size of the infant are also major factors.

Some of the children develop postoperative strictures at the site of an anastomosis. Those strictures can be treated at a later date by esophageal dilations from above, or if this should not suffice, by retrograde dilations after a gastrostomy has been performed. Difficulties with esophageal strictures after repair of the tracheo-esophageal fistula do not occur until the children become older and start taking more nearly solid food. Usually, no difficulties are encountered as long as they are on formula or soft foods. We have not reoperated any of the children for strictures at the site of an anastomosis, but some other surgeons have. I believe it may become necessary in some instances to do so. I want to tell you about a child who had an operation just last week. The child was sent to us with the diagnosis of an imperforate anus. During the examination here, it became evident that the child also had a tracheo-esophageal fistula. Examination revealed air in the gastro-intestinal tract below the level of the diaphragm. The child was in fair condition. We carried out a right thoractomy first and repaired the tracheo-esophageal fistula and then performed an end-to-end anastomosis to come at the atresia of the esophagus. At the time of exploration, it was found that the child had a very anomalous set-up of the large vessels of the chest, namely, a right descending arch which made the anastomosis difficult to accomplish.

The day following the repair of the tracheo-esophageal fistula, the imperforate anus was repaired. The child died 24 hours following the second operative procedure. At the time of the post-mortem examination, the following findings were encountered: complete absence of a left kidney, a large right hydronephrosis, a right descending aortic arch, a very large patent ductus arteriosus that constricted the trachea within a vascular ring, and a very large interauricular septal defect and extensive bilateral aspiration pneumonia. It becomes evident that the salvage rate in children with additional congenital anomalies is small, but one never knows and one has to try. One will be successful in about 50 per cent of all patients.

Dr. MacQueen: We have discussed two cases that have unrelated diagnoses. These cases are related in that they represent a common problem: congenital anomalies of the newborn that, uncorrected, are incompatible with life. As a profession we have decreased infant mortality during the first year of life, but the mortality during the first hours and days of life has been less satisfactorily influenced. The cases presented today are examples of congenital anomalies that can be recognized and corrected during this critical period.

The JOURNAL of *the* Iowa State Medical Society

ISSUED MONTHLY

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RANSOM D. BERNARD, M.D.

Our Society's genial general manager, Dr. Ransom D. Bernard (better known as "Sam") attained his majority in work for organized medicine and retired on January 1, 1954. It is with mixed emotions that we see Sam leave the ranks, yet we can only wish him the very best of everything in the future.

Dr. Bernard deserves the thanks of every member of the Society for the long years of labor that he expended in our behalf. Almost every phase of our activities has been promoted through his efforts. The basis of our Legislative Committee work was a direct result of his planning and will stand as a guide to us for many years to come. The success of the Blue Cross-Blue Shield program has been enhanced through his advice and assistance ever since its inception. Then, when television came along, he was called upon to arrange the medically sponsored programs. Their constant improvement reflects the effort that he has devoted to them.

In addition to all of those endeavors, one cannot overlook the years that Dr. Bernard spent in the practice of his profession at Clarion, years when he distinguished himself through service to the public at large. And as a husband and father, he has demonstrated traits of character that we all should emulate.

We shall miss you, Sam, while you are enjoying your years of retirement. But we are glad that you intend staying close enough to us so that we can call upon you for counsel, should any emergencies arise. As a small appreciation of the fine work that

you have performed for the Iowa State Medical Society, all of us join in saying "Godspeed" to you.

HOSPITAL SERVICES—WHAT THEY ARE NOT

Recent developments in Blue Cross coverage have created many problems for the medical profession. Chief among them, of course, is the inclusion of professional services. Starting as it did, several years before Blue Shield came into being, Blue Cross gradually added more services to its contract, including x-ray, pathology and anesthesiology, so that as a result a large segment of the public has come to regard such services as hospital rather than professional services. To add to the confusion, some pathologists, some radiologists, and some anesthesiologists work as salaried hospital employees, while in some communities there are no anesthesiologists available, and hospital technicians are employed to give anesthesia under the direction of the attending physician.

The problem is national rather than local. The American Medical Association had a special committee studying it for several years and its report, known as the Hess report, was made in June, 1950, and approved by the A.M.A. House of Delegates. The principles embodied in that report were reaffirmed by the A.M.A. House of Delegates at its meeting in December, 1953.

Here in Iowa the Blue Cross Comprehensive 70 contract pays for anesthesia when given by a hospital employee, but not when given by a doctor of medicine. This difference is not explained to the subscriber when the policy is sold, and as a result much hard feeling is engendered when the patient receives a bill from the anesthesiologist. In some communities where a hospital anesthesiologist is available, patients are asking to be hospitalized where they will be covered in full. This creates a hardship upon the anesthesiologists of the community and upon the hospitals that are not exceeding their scope of service.

An effort has been made to have Blue Shield take over the anesthesia benefit when the subscriber carries both Blue Cross and Blue Shield, but since many persons carry Blue Cross only, the problem remains.

Recently the situation has been further aggravated by the national Blue Cross agency's sale of a policy providing both hospital and medical services to the packing industry. National Blue Shield, under its contract agreement with National Blue Cross, is legally liable for provision of the medical services. Iowa Blue Shield, however, did not accept the sale and is not servicing the contract.

Here again, hospitals are selling medical services, a procedure which is contrary to legal statutes in many states. Possibly the Iowa State Medical Society is locking the barn after the horse is stolen, but it has decided, after long deliberation by several of its committees and officers, to appoint a committee to meet with a similar committee of the

Iowa Hospital Association, if that Association will accede to the request, and discuss separation of professional services from hospital service. It is hoped that it will be possible in the near future to make the changes necessary so that Blue Cross will, in the future, offer only hospital service, and Blue Shield will cover all professional service.

SLEEPING PARTNER*

RICHARD GORDON

Surgeons are traditionally accused by the medical profession of introducing two necessary evils—wound infection and anaesthetists. In the past hundred years both of these have fortunately become less dangerous to human life.

When chloroform was still a novelty and gas a luxury, the anaesthetist was a seedy practitioner, a Coroner's familiar, creeping round hospitals and nursing homes with a rag of lint in one pocket of his coat tail and a bottle of ether in the other. With this equipment he could perform his shaky tricks instantly and anywhere, like a strolling conjurer. The surgeons took the limelight and ninety per cent of the fee: the anaesthetist at his best was only a Jeeves, ready to smooth the surgical progress of his master, to encourage him in clinical distress, and to temper discreetly his operative enthusiasms. He was a butt for all the hearty surgical fun that battens on blood and sterile towels—how relieved the nurses were when Sir Lancelot's wrath at a moving target was canalized into: "If the patient can keep awake, Mr. Anaesthetist, so can you!" From his perch at the head of the table he yawned beneath his mask at weary accounts of forgotten anatomical battles, and he left the hospital by bicycle in the dust of the surgical limousine.

As operations became longer and anaesthetists had more hours of comparative inactivity to meditate over their humility, they invented a scheme to assert their personalities in the operating theatre. The trick was simple: they repudiated the rag-and-bottle, and invented a machine a-glitter with chromium plate and taps to administer the anaesthetic for them. At first the surgeons pretended amusement, and made jokes about "The Gas, Fight, and Choke Company." But they were mystified and intimidated, particularly when the anaesthetist strolled away for a cup of coffee and left his patient tranquilly free-wheeling. It had previously been plain to everyone in the theatre that any damn fool with a bottle and roll of lint could give anaesthetic, but even the dullest junior probationer could now see that the manipulation of this secret machine needed the fused skills of an engineer, pilot, and safebreaker.

The anaesthetists coolly pressed their advantage.

The machines became bigger and more aggressive, forcing the surgeon to operate uncomfortably in the remaining corner of the theatre. Anaesthetists boldly told their own stories across the towel clips, and the daily operating list ended politely with "General Anaesthetic, Dr. Tompkins, please." Surgeons who once began an operation by plunging knife into abdomen with a roar of "Is he asleep, Bill?" waited patiently for permission, with sterile gloves meekly clasped. Afterwards they bowed over the swab bucket, as the anaesthetist neutralized his apparatus with a pair of spanners, and said "Thank you, Dr. Tompkins—a very beautiful anaesthetic. We shall have the pleasure of working together next week, I presume?" Two limousines now left the hospital courtyard together.

When surgeons and anaesthetists reunited after the war they were faced with problems of readjustment as powerful as those of any other long separated couple. The surgeons had seen Army doctors at work with squares of flannel and ether cans, and had learnt so much about lorries, guns, tanks, and radio sets from enthusiastic brother officers that they were no longer frightened of an anaesthetist's civilian equipment. But they were infuriated to find that anaesthetists has assumed the grand simplicity; heavy apparatus was pushed into theatre sister's store room, and modern anaesthesia conducted with a single syringe.

This concentration in the anaesthetist's armament was permitted by purification of the curare arrow-poison from South America: the Brazilian pigmy blows a curare-tipped dart into his victim before eating him, and the British anaesthetist sticks a curare-filled syringe into his patient before dishing him up to the surgeon. But as more and more unwanted side-effects of the arrow-poison were discovered, and more and more drugs were invented to counteract them, the anaesthetist's syringes grew into a battery of violet poisons and antidotes.

Today he arrives at the hospital in a van, which contains his assistants and a number of expensive electronic machines to let him know the pulse rate and blood pressure without having to count them. The surgeon is allowed to operate as long as his manipulations do not disturb the anaesthesia: to complain that the narcosis is not sufficiently profound is as unthinkable as sending back the speciality at a famous restaurant. Anaesthetists are friendly men, and have no malignancy in their new mastery: every one of them thoughtfully thanks the surgeon at the end of the operation for making, with his skill, their superb anaesthetic necessary.

1954 AAGP SCIENTIFIC ASSEMBLY
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MARCH 22-25

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BLOOD TRANSFUSIONS

Recently, Bernard Strauss and Jose Torres, of New York, pointed out that much blood is being wasted in ill-advised and apparently needless transfusions. It is doubtful that extra blood ever has a tonic effect upon a neurotic person, and there certainly is little sense in giving transfusions to a person who is dying of cancer or uremia. Nor is it necessary to give blood transfusions in cases of mild anemia.

The investigators report that, of 290 patients who received transfusions, there were no acceptable indications for transfusion in 38, and in another 11 the indications were doubtful. Hence 13 per cent of that series of transfusions were ill-advised. Interestingly, 12 transfusions were given to patients who had red-cell counts between 4.5 and 5 million, and 7 transfusions were given without any previous study of the blood.

We all know that a transfusion should not be given thoughtlessly because it carries the danger of a possibly serious hepatitis.

Blood may be conserved if one uses various portions of the whole blood, depending upon the condition. Following, are some suggestions:

Red cell mass and packed red blood cells are indicated for transfusions in uncomplicated anemias not associated with hypoproteinemia, where whole blood transfusion is indicated. They are particularly indicated in patients with limited cardiac reserve, hypertension and nephritis. In such patients, when one uses one of these, the effect of a pint of whole blood can be achieved by the intravenous administration of no more than half that amount of liquid. Because the plasma has been removed, the sodium content of the transfusion is also greatly reduced. These preparations are administered in the same manner as a transfusion, and will flow through an ordinary needle without difficulty. They may be used in most children needing transfusions, for the cellular part of blood usually is what they need.

Fresh frozen plasma for hemophilia can be had from your blood center, packed in dry ice.

Serum albumin is plasma with the gamma globulin extracted and with much of the salt solution removed. Gamma globulin is saved for use against the paralysis of polio, in the modification of measles and in the prevention of hepatitis.

Serum albumin, especially when used with plasma expanders, can be administered whenever plasma is indicated and with no danger of serum hepatitis. In emergency situations, this combination may be used until whole blood is available for transfusion.

MINUTES OF MEETINGS OF STATE SOCIETY
SOCIETY OFFICERS AND COMMITTEES

BOARD OF TRUSTEES

December 13, 1953

The Board of Trustees of the Iowa State Medical Society met in the central office Sunday morning, December 13, 1953, with the following persons present: Drs. L. A. Coffin, J. W. Billingsley, W. L. Downing, R. N. Larimer, G. V. Caughlan, Boyd Anderson, and R. D. Bernard, Mr. Don Taylor and Miss Mary L. McCord. The meeting was called to order at 10:15, and the Board listened to plans to raise funds for the Iowa State Medical Society Educational Fund. Because it felt action on the proposal should be the responsibility of the Executive Council, it deferred voting.

The second matter to be discussed was the problem of medical services in hospital insurance contracts. It was felt that it was essential to call the Executive Council together to discuss this matter so that the State Society might initiate some action.

The third matter was a letter from the Chairman of the Public Relations Committee. The Board approved of the committee's holding an indoctrination meeting for new members in March of 1954.

The Board voted to send a representative to the 14-state conference on nursing to be held in Kansas City, Kansas, January 10; appointed Dr. T. L. Ward of Arnolds Park to serve as Councilor of the Third District; accepted Dr. Bernard's resignation as of January 1, 1954; appointed Mr. Donald L. Taylor Executive Secretary as of January 1, 1954; and named Miss McCord Assistant to the President and Business Manager of the JOURNAL as of the same date.

Dr. Larimer announced that the Executive Council would meet January 7, 1954, and the meeting adjourned at 3:30 p.m.

COMMITTEE ON MEDICAL CARE FOR THE INDIGENT

December 15, 1953

The Committee on Medical Care for the Indigent met in the central office Tuesday morning, December 15, 1953, with the following persons present: Drs. F. D. McCarthy, of Sioux City; A. J. Havlik, of Tama; M. G. Bourne, of Algona; R. D. Bernard, of Des Moines; Mrs. Eleanor Carris, and Miss McCord. Mrs. Carris, who represents the State Department of Social Welfare, discussed with the committee the medical program of the old age pensioners and the aid to the blind. The general feeling seemed to be that any medical program would be better supervised on a local level, and the committee was in favor of having it turned back to the counties.

Mrs. Carris discussed nursing homes, and the committee mentioned the possibility of obtaining

some Hill-Burton funds to provide beds for chronic illness.

The meeting adjourned at 1:00 p.m.

COMMITTEE ON HOSPITAL AND PROFESSIONAL RELATIONS

December 16, 1953

The Committee on Hospital and Professional Relations met in the central office Wednesday morning, December 16, 1953, with the following persons present: Drs. C. H. Stark, of Cedar Rapids; D. C. Koser, of Cherokee; J. H. Henkin, of Sioux City; W. K. Cooper, of Cedar Rapids; R. W. Blanchard, of Council Bluffs; E. P. Lovejoy, of Des Moines; M. G. Beddoes, of Waterloo; V. L. Sciscent, of Waterloo; R. E. Smiley, of Mason City; C. T. Maxwell, of Sioux City; J. W. Billingsley, of Newton; E. E. Munger, of Spencer; G. F. Harkness, of Davenport; Fred Sternagel, of West Des Moines; and R. F. Birge, F. C. Coleman, M. I. Olsen, R. D. Bernard and A. B. Phillips, of Des Moines. Mr. Don Taylor, Mr. W. H. Sherin, and Miss McCord were the lay people present. The meeting was called to order by Dr. Stark, who reviewed some of the actions taken by his committee in the past toward removing professional services from Blue Cross contracts. Representatives of the various professions were given the floor and allowed to express their opinions about what should be done. Mr. Sherin explained operating procedures of Blue Cross and Blue Shield. Dr. Coleman and Mr. Myers discussed the chapter of the Code under which Blue Cross and Blue Shield operate.

A great deal of discussion ensued, and the conclusion was that the next step would be to meet with the Executive Council. It was voted that the Committee on Hospital and Professional Relations, together with one representative from radiology, anesthesiology, and pathology, meet with the Executive Council January 7, 1954, to work out some procedures satisfactory to the specialties involved. The motion was seconded and carried, and the meeting adjourned at 12:30.

BOARD OF TRUSTEES

JANUARY 7, 1954

A meeting of the Board of Trustees of the Iowa State Medical Society was held in the Society headquarters on Thursday, January 7, 1954, at 10:00 A.M. Those in attendance were Drs. L. A. Coffin, J. W. Billingsley, W. L. Downing, R. N. Larimer, G. V. Caughlan, N. B. Anderson and A. B. Phillips, and staff members Miss Mary McCord and Mr. Don Taylor.

Payment of the pending bills was authorized. The president and trustees regretfully accepted the resignation of Dr. Albert E. Johann as chairman of the Special Committee to Study Group Insur-

ance, and confirmed the appointments of Drs. R. A. Dorner and E. M. Honke to the Committee on Veterans' Affairs.

In response to a letter from the Iowa Highway Commission regarding average fees for routine examinations of new employees, the Trustees decided to say that for comparable insurance examinations the fees are \$10, but that the Iowa State Medical Society does not in any way attempt to establish the fees to be charged by its member physicians.

Two representatives were authorized to attend the meeting of the Blue Shield Medical Care Plans in Chicago on January 16 and 17; one to attend the Ninth National Conference on Rural Health in Dallas on March 4-6; three to attend the A.M.A. Regional Legislative Conference in Denver on January 24; one to attend the Second Conference on Management- and Union-sponsored Health Centers in Louisville on February 24; six to attend the A.M.A. Regional Conference on Veterans with Non-Service-Connected Disabilities in Omaha on February 28; and four (in addition to the delegates) to attend the A.M.A. Annual Session in San Francisco on June 21-25.

During a discussion of the budget, necessary adjustments were made in the salaries of the office personnel, and it was decided to employ an additional secretary to do office-machine work and to perform clerical tasks incident to the publication of the JOURNAL. The meeting adjourned for lunch at 1:00 P.M., reconvened at 1:30 to make some arrangements having to do with accounting, and adjourned finally at 1:45 P.M.

EXECUTIVE COUNCIL

JANUARY 7, 1954

The Council decided that the members of its own group, the members of the Committee on Medical Education and Hospitals, and Dean Norman B. Nelson, of the State University of Iowa, should be invited to represent the Society at a dinner to be held by the State Board of Education on February 11.

In response to the request of Mr. John V. McCarthy, of the National Foundation for Infantile Paralysis, that a physician be named to represent the Society at the Poliomyelitis Congress in Rome, Italy, in September, 1954, the Council decided that it had no objection to a member's attending as either a delegate from the Foundation or as the official representative of his local group, but it did not wish to appoint anyone to represent the State Society there.

The following statement was adopted as an expression of the Society's position as regards the conflict between Medical Indemnity of America, Inc., and local Blue Shield plans:

1. The Iowa State Medical Society opposes MIA's entering Iowa under Blue Shield insignia, for the original and generally held conception has been

that Blue Shield involves medical service, rather than payments of money to policyholders.

2. The Iowa Blue Shield Plan must be used for Iowa people, and that Plan, according to Iowa law, can operate only as a service company.

3. Blue Shield should not undertake to provide hospital or nursing care as defined in Chapter 514 of the 1950 Code of Iowa, but it should take over radiology, pathology, anesthesiology and physiatry, as well as all other medical services.

4. State medical societies should have a greater voice at the policy-making level in Medical Indemnity of America, Inc. The proper size of the Board and the representation accorded the various states should be reviewed.

5. The separate entities of MIA and Health Service, Inc. should be maintained at all times; their managements should be separate; and they should not be liable for one another's obligations.

Delegates chosen to represent the Iowa Society unofficially at the meeting of Blue Shield Prepaid Plans in Chicago on January 16 and 17 were asked to regard the preceding as their mandate. As a means of dealing with local aspects of the same problem, the Council decided to request a meeting of representatives of the Iowa Hospital Association, the Blue Cross and Blue Shield organizations, and the Iowa State Medical Society to arrange the cessation of medical practice by hospitals within this state.

Toward the conclusion of the meeting, the Council went into executive session to consider other business of the Society, and in particular some of the actions that had been taken by the Interim Meeting of the A.M.A. in St. Louis.

The meeting adjourned at 5:15 P.M.

MEDICAL STENOGRAPHY

Miss Etta Miller, who has taught evening classes in medical stenography in the State Society's headquarters building for some time, is henceforth to be sponsored by the Des Moines Board of Education's Adult Division and will meet her groups at The Des Moines Technical School, 15th and Center Streets. Tuition for her course is to be \$8 for the ten-week term, if it is decided that the class is to meet twice a week. If substantial numbers of both beginning and advanced students signify their intention of enrolling, she will meet each group just once a week, and the fee will be correspondingly reduced.

Miss Miller's work is intended to help doctors' secretaries and hospital personnel, and consists principally of instruction in the prefixes, suffixes, spelling, pronunciation and definition of medical terms. Enrollees need not have a knowledge of shorthand. The classes are scheduled for Tuesday and Thursday evenings, from seven to nine o'clock, and the next starting date is February 9. For further information, address Miss Miller at 1102 Douglas Avenue, Des Moines 13.

IOWA INDUSTRY SUPPORTS MEDICAL EDUCATION

W. F. Poorman, President of the Central Life Assurance Company, of Des Moines, and 21 other business leaders from Des Moines and Newton who are acting as sponsors, have secured, to date, a total of \$13,271.21 in contributions from business corporations for the National Fund for Medical Education. It is hoped that the Fund will eventually raise \$50,000 a year for the training of students.

In addition to serving as consulting actuary and secretary of the board of directors of Iowa Medical Service (Blue Shield), Mr. Poorman is doing a considerable part of the fund raising by himself, and thus richly deserves the gratitude of all physicians, and of their patients as well.

The formulae according to which it was suggested that corporations arrive at the sizes of their gifts are as follows:

Manufacturers: From 1/20 to 1/2 of one per cent of net earnings, from \$100,000 to \$20,000,000. From 1/30 to 1/15 of one per cent of net earnings from \$20,000,000 to \$100,000,000. Where net earnings is not an available figure, the basis suggested was 20 per cent of net worth.

Insurance Companies: \$1,000 for every \$100,000,000 of assets.

Banks: \$200 for every \$100,000,000 of deposits.

Following is a list of the Iowa contributors to the fund, up to December 15, 1954:

Armand Company
Bankers Life Company
Central Life Assurance Company
Des Moines Clearing House (member banks in Des Moines)
Equitable Life Insurance Co. of Iowa
Iowa Life Insurance Company
Iowa State Traveling Men's Association
Koch Bros.
Maytag Company (Newton)
Meredith Publishing Company
James M. Pierce Corporation
Pittsburgh-Des Moines Steel
Register & Tribune
Rowat Cut Stone Company
Ruan Transport Corporation
State Finance Company
Wetherell & Harrison
Winpower Manufacturing Co. (Newton)

Omaha Meeting of ACS

(Continued from page 65)

ing, and that will be followed by a panel discussion on pediatric surgery.

Iowa physicians scheduled to appear on the program include Dr. J. H. Randall, Dr. H. M. Burian, Dr. W. C. Keettel, Dr. R. T. Tidrick, and Dr. C. B. Larson, all of Iowa City, and Dr. R. A. Dorner, of Des Moines.

Additional information about the program can be had by addressing Dr. H. Prather Saunders, Associate Director, The American College of Surgeons, 40 East Erie Street, Chicago 11, Illinois.

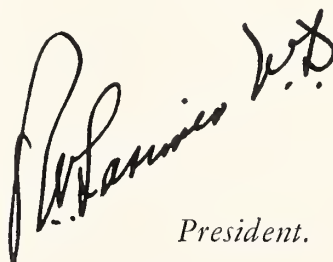
President's Page

The acceptance by the Trustees of the resignation of Dr. Bernard will be common knowledge by the time this is printed. Conferences were held with Dr. Bernard in December, and because the dead line for the JOURNAL came before official action was taken on Dr. Bernard's request, it was possible to insert only a short paragraph in his page of the January JOURNAL, noting the actions of the trustees.

The officers of your Society accepted Dr. Bernard's resignation with the greatest regret. He had accepted the responsibilities of his position at a time of great expansion of our activities, and, with his experience and abilities, he was the one person available who was qualified. Dr. Bernard had very definite projects in mind when he assumed his new role, and he now feels that these have been organized and given sufficient impetus so that they can be carried on without his direct supervision. He has given us long hours of exacting work, for which every member of our Society should be grateful. For the Society's present healthy condition—its active Council, its various extremely active committees, its improved public-relations program, its outstanding television series and its improved relations with the various groups in the state—Dr. Bernard can be given major credit. He has earned our gratitude and respect, and we hope he can enjoy his retirement from the onerous work which he has been doing. We shall call upon him again and again for help and advice, I am sure.

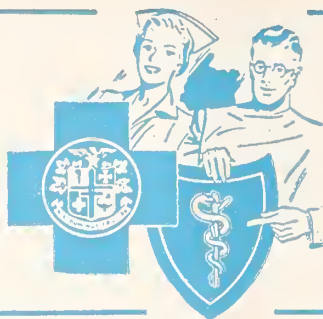
We urge you to follow, with care, the development of the Blue Shield-Blue Cross conferences. These will be held at both the national and state levels. A new realignment of policies which will directly affect doctor-hospital relationships will undoubtedly develop. It will take our very best thinking and efforts to work the problem out satisfactorily.

The program for the State Meeting is virtually complete. The House of Delegates will have several decisions to reach. Whether you are a delegate or not, you should plan to be present in Des Moines to hear the discussions of the various resolutions which will be introduced.

A handwritten signature in dark ink, appearing to read "R. L. ...", with a stylized flourish at the end.

President.

BLUE CROSS



BLUE SHIELD

PROGRESS DURING 1953

The various activities and scope of work of the Blue Cross-Blue Shield physician relations department increased proportionately during 1953, along with rising enrollment and continuing demands for information by the sponsoring profession.

The main function of the department, however, continued to concern keeping the medical profession of Iowa informed on the administrative procedures and benefits of Blue Cross-Blue Shield. Therefore, the field staff of the department has attempted to contact each doctor about once every three months.

Individual Physician Contacts

Some 5,766 visits were made with physicians personally, or with their office personnel on various Blue Cross-Blue Shield matters. Included in these visits have been many special requests for information on particular aspects of the coverage of the plans and their administration.

Hospital Contacts

Hospital visits made by the field staff numbered approximately 150. Usually these visits were made as a result of special requests by hospital personnel or physicians.

County Medical Society Meetings

At the invitation of the various county societies, the field staff has conducted 13 meetings on Blue Cross-Blue Shield. The department is always glad to receive these invitations and is hopeful that every county society will feel free to request staff speakers for such county society meetings.

Doctors' Secretaries' Meetings

Members of the department have spoken on Blue Cross-Blue Shield before 31 county-wide meetings of doctors' secretaries and nurses. The purpose of these meetings has been to acquaint the personnel with changes in the plans' administrative procedures and benefits. These meetings have met with wide approval of the profession, since a well-informed secretary or nurse can do much to serve her doctor and his patients on the details of Blue Cross and Blue Shield.

Individual Subscriber Visits

Among other activities were special visits with individual subscribers of Blue Cross-Blue Shield on various matters. Generally speaking, these contacts have been appreciated and have resulted in a better understanding of Blue Shield and its philosophy.

Health Improvement Association Meetings

Members of the field staff have attended 23 meetings of county organizations known as County Health Improvement Associations. These organizations are sponsored in many counties by Blue Cross-Blue Shield with the cooperation of farm organizations. Members of the staff explained the benefits of the new Blue Shield contract at the meetings.

Industrial Contacts

In cooperation with members of the enrollment departments of both Blue Cross plans, the field staff of physician relations contacted about 200 Blue Cross-Blue Shield groups last year in order to promote better understanding of Blue Shield and the philosophy behind it.

Other Activities

Some of the other activities of the department consisted of attending the annual meeting of the Iowa State Medical Society, the Conference of County Society Presidents, Secretaries, and Blue Shield Liaison Physicians, attending several county fairs, at which Blue Cross-Blue Shield maintained information booths and other special activities.

The entire staff of the physician relations department continues to be very grateful for the fine cooperation given it by the doctors of the state of Iowa and their personnel and is anxious to be of greater service in 1954.

BLUE SHIELD MONTHLY STATISTICS February 1, 1954

Blue Shield Members (Estimated).....	428,682
Claims Processed for Payment.....	10,043
Amount Paid in Claims.....	\$311,781.47

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

THE PSYCHIATRIST: HIS TRAINING AND DEVELOPMENT. Report of the 1953 Conference on Psychiatric Education held at Cornell University, Ithaca, New York, June 19-25, 1952. Organized and conducted by the American Psychiatric Association and the Association of American Medical Colleges. Editorial Board: *John C. Whitehorn, M.D.,* Chairman, *Francis J. Braceland, M.D.,* *Vernon W. Lippard, M.D.,* and *William Malamud, M.D.* (Washington, American Psychiatric Association, 1953. \$2.50).

SCIENCE AND MAN'S BEHAVIOR: THE CONTRIBUTION OF PHYLO BIOLOGY (Including the complete text of **THE NEUROSIS OF MAN**), by *Trigant Burrow, M.D.,* Ph.D. (New York, The Philosophical Library, 1953. \$6.00).

SCHOOL HEALTH SERVICES... A Report of the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association with the cooperation of contributors and consultants, *Charles C. Wilson, M.D.,* editor. (Washington and Chicago, The National Education Association and the American Medical Association, 1953. \$5.00).

THE YEARBOOK OF DRUG THERAPY (1953-1954 Year Book Series), ed. by *Harry Beckman, M.D.* (Chicago, The Year Book Publishers, 1954. \$6.00).

BOOK REVIEWS

MICROBIOLOGY AND PATHOLOGY, by *Charles F. Carter, M.D.,* and *Alice L. Smith, M.D.,* Fifth Edition. (St. Louis, C. V. Mosby Co., 1953. \$5.50).

Charles F. Carter, B.S., M.D., and Alice L. Smith, A.B., M.D., are pathologists with wide experience in the field of nursing education. Dr. Smith now joins Dr. Carter in writing the fifth edition of this text for nurses. The first edition was an outgrowth of a text by Dr. Carter on bacteriology for nurses, to which a section on pathology was added in 1936. The book is intended for the modern school of nursing and covers microbiology and pathology from the nurse's point of view, stressing "the idea that signs and symptoms of disease are but outward manifestations of underlying changes."

The subject material is divided into two parts which are subsequently subdivided into fifty-nine chapters. The chapters are organized in outline form, and an extensive glossary is present at the end of the last chapter. A detailed list of contents and a good index are also included.

In this edition several new illustrations have been added. Most of the color plates, however, have been deleted. Several of the illustrations of blood cells, in being changed from color to black and white, have lost much of their effectiveness. Short but adequate bibliographies follow the chapters, and a list of useful review questions is appended.

The manner of treatment is didactic and the style of writing purely factual. This was undoubtedly due to the large amount of material which it was necessary to pack into a small space, but the resultant loss of effectiveness is obvious. The large amount of data included is accurate, and controversial problems are handled conservatively.

In summary, although there is room for improve-

ment in style and illustration, this fifth edition compares favorably with contemporary works in the field of nursing education.—*F. C. Coleman, M.D.*

PLANNING GUIDE FOR RADIOLOGIC INSTALLATIONS, by the Committee on Planning of Radiologic Installations of the Commission on Public Relations of the American College of Radiology, *Wendell G. Scott, M.D.,* Chairman. (Chicago, The Year Book Publishers, Inc., 1953. \$8.00).

The book is based on findings of the Committee on Planning of Radiologic Installations of the Commission on Public Relations of the American College of Radiology.

Suggestions were received by the committee from such sources as radiologists, manufacturing companies of x-ray equipment and film, federal health agencies, the American Hospital Association and the American Institute of Architects.

When there have been such contributors, it becomes evident that a book so compiled is a necessity in planning any new installation or remodeling an old department. The book is well organized and not only submits plans for various size departments but gives the reasons for each step needed. It deals with such problems as physical set up of a department, protection to personnel from ionizing irradiation, film identification and method of storing records and films. There is one chapter devoted to the installation of radioactive isotope laboratories.

Not only does it afford information for hospital installation, but it also suggests plans for the private office for radiological service.

In summary, it brings into one unit information that could be gained only by years of experience and tremendous correspondence with the contributing sources.—*Noble W. Irving, M.D.*

PEDIATRIC GYNECOLOGY, by *Goodrich C. Schauffler, M.D.,* Third Edition. (Chicago, The Yearbook Publishers, Inc., 1953. \$7.50).

The third edition of this popular book has been completely revised, with present day methods being presented.

Of particular interest is the chapter on the method of examination and recommended instruments for children. These, in themselves, are major problems in these cases. A chapter on the embryology of the female genital tract is now included.

The chapters on vaginitis and irregularities of the menarche are especially helpful, not only to gynecologists, but to general practitioners who, of course, see most of these cases first.

In addition to these gynecological subjects, there are also chapters on special urologic considerations and on special proctologic considerations.—*H. Kirby Shiffler, M.D.*

Iowa Academy of General Practice

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WHAT IS ETHIC?

It is probable that no one can say with any degree of certainty just what was in the minds of the men who coined the phrase "medical ethics." One can suspect, at least, that in choosing it in preference to "medical morals" or "medical rules and regulations" they sought to dignify their subject and, by using a word of Greek derivation, to bring into the minds of their readers the tradition of medicine that began with Hippocrates and Galen.

There is now a considerable group of practitioners who seem inalterably convinced that those forefathers of ours picked the word *ethics* for neither of those reasons, but because they wanted everything they wrote under that heading to be regarded thenceforth as final, irrevocable and immutable. That point of view, as an interpretation of the pioneers' intentions, may be correct, but as a basis for the contention that we should treat the Code as sacrosanct to the extent that we must never make changes, it is dead wrong.

Whether inadvertently or deliberately, the founders chose the wrong word. They erred just as seriously as one of us would do if he were to use the term *pleurisy* when he meant *empyema*. Though the reader may think that a tempest is being brewed in a teapot, the reluctance that our colleagues feel toward amending the Code when changing customs and business practices come into conflict with it can be traced to that mistake, and it is highly important that the misunderstanding be cleared up.

Ethics is a philosophical term. Indeed all philosophy is divided into three branches: *physic*, *ethic* (plural: *ethics*) and *logic*. Science and its mechanics are included under *physic*. Logic is the science or correct thinking. *Ethic* is the science of moral duty—more broadly, the science of the ideal human character and the ideal ends of human action. The chief problems with which *ethic* deals concern the nature of the *summum bonum* (greatest good), the origin and validity of the sense of duty, and the character and authority of moral obligation.

There are three principal classifications of ethical theories:

1. Theories that consider happiness to be the greatest good. These may be egoistic or altruistic.

2. Theories of perfectionism or self-realization.

3. Theories resting upon the relation of man to the universe or to divine law, such as Stoicism, evolutionism, and Christian ethics.

When we say that the United States is a Christian nation, we mean that, as a nation, we subscribe to Christian ethic. Christian ethic is based on the fundamental principle of the dignity of man. Philosophically speaking, it may be said that there are but two aspects to man—one deals with his physical or corporeal being, and the other has to do with his various relationships. Strangely enough, only the medical profession and its allies deal with the physical and corporeal aspects of man. All other occupational groups deal with his various and diverse relationships.

So ethic gives assent to right principles and suggests science only. It has its *absolute* factor which affirms an unchanging code, upholding the basic principles concerning the dignity of man. It likewise has a more *relative* factor which regards moral rules as they vary with human development.

Morals deal with our mores, which change. Morals are concerned with the manners, customs, habits, way of life and conduct of man. Morals pertain to our character, intentions, social relationships, *et cetera*, viewed against a background of ethic. Another characteristic of morals is that they are capable of being judged as good or evil. Not so with ethic. Morals spring from and pertain to man's natural sense or reasoned judgment of what is right and proper. Morals refer to the practice of right or wrong conduct and connote proper or improper practices.

A few years ago it was considered immoral for a woman to smoke a cigarette in public. Now our manners, customs and habits—our social relationships—have so changed that such behavior is accepted. This illustrates how our mores and morals may change, but it is obvious that the act of a woman's smoking has no influence on our belief in the dignity of man. It is a moral problem, not an ethical one.

In that era of our history when the insane or peculiar were adjudged bewitched, they were put to death. Now we hospitalize them and have even found satisfactory treatments for them. This change in our moral attitudes has been brought

about by the influence of social and scientific developments. Our belief in the dignity of man has remained constant and unchanged. The same can be said as regards our changing attitudes concerning punishment for crime; our attitudes and practices change, but our principles do not. Thus, ethic deals in principles, morals deals with practices, and ethic radically transcends morals.

There is one more classification under the system that guides man's relations upon which we have not yet touched, namely laws and rules of conduct. These include instruction for the accomplishment of specific purposes, the control of certain inter-relationships, the various ramifications of procedures in the handling of property, *et cetera*. These are detailed, legal commands and prohibitions, even including penalties for infractions in some instances, or they are merely rules and procedures that are urged upon us.

It is in the last of these categories that we find the "Principles of Medical Ethics of the American Medical Association." Satisfy yourself of the veracity of this statement by reading them. They direct the procedure that physicians are to follow under specific circumstances. A good example is to be found in Article IV, Section 8. It does not involve basic ethic, or even morals, but is a rule of conduct. The new section adopted by the House of Delegates at St. Louis, on December 3, 1953, concerning the way in which a doctor shall give out information for publication is in this class, regardless of what may have prompted it. It is simply a rule of conduct.

Iowa's request to allow all doctors to do joint billing if they wish is likewise just a proposed rule of conduct, not a matter of ethic or morals. For instance, many situations can be cited in business practice where a contracting party presents a statement for an entire bill. Building contractors, garages, and, in our own profession, groups or clinics and hospitals all use this practice.

The phrase "fee splitting" connotes a division of fees or the payment of a commission without the patient's knowledge. A principle of morals is offended thereby. But an itemized statement of a joint or combined bill in medicine is a service or convenience to the patient—the same sort of service or convenience that we doctors receive from the contractor whom we have engaged to plan and construct or remodel and repair a building. We pay him and he pays the carpenters, plumbers, plasterers, painters, *et cetera*. The joint or combined bill is thus merely a way of adapting ourselves to a change in American mores. It is not intended to legalize fee splitting, nor is it intended to correct it or supplant it. Endorsing the practice of joint billing will do none of these things. It is a fair, open and aboveboard method of dealing with patients, and it shows what each participating doctor is receiving for his work. The patient can judge the fairness of the total bill because he

knows the parts of which it is made up. There is nothing in the least underhanded about it.

For anyone who wonders, the general practitioners of Iowa, like all other reputable and conscientious members of the medical profession, have neither the intention nor the desire to legalize fee splitting.

SURGICAL TYPES OF HEART DISEASE

A program on surgical types of heart disease is to be presented on Saturday and Sunday, February 20 and 21, at the Art Center, Grand Avenue at Polk Boulevard, Des Moines, under the auspices of the Department of Internal Medicine at Iowa Methodist Hospital.

The Saturday program will consist of the following:

- 9:00 A.M. David Pugh, M.D., Mayo Clinic, Rochester, Minnesota: "The Use of X-Ray and Fluoroscopy in the Diagnosis of Heart Disease."
- 10:30 A.M. O. Henry Janton, M.D., Philadelphia, Pennsylvania: "Selection of Patients for Mitral Valve Surgery."
Discussion by James W. Culbertson, M.D., Associate Professor of Internal Medicine, S.U.I.
- 1:30 P.M. F. F. Rosenbaum, M.D., Marquette University, Milwaukee, Wisconsin: "The Use of Electrocardiograms in the Diagnosis of Surgical Heart Disease."
- 3:00 P.M. S. Gilbert Blount, M.D., University of Colorado, Denver: "Diagnosis of Congenital Heart Disease From the Clinical Point of View."

The Sunday morning program, lasting from 9 until 12, is to consist of a clinic, and it, like the speaking program of the preceding day, will take place at the Art Center.

The physicians of Iowa and of the adjoining areas are cordially invited.

POPULATION GAIN PACES HOSPITAL CONSTRUCTION

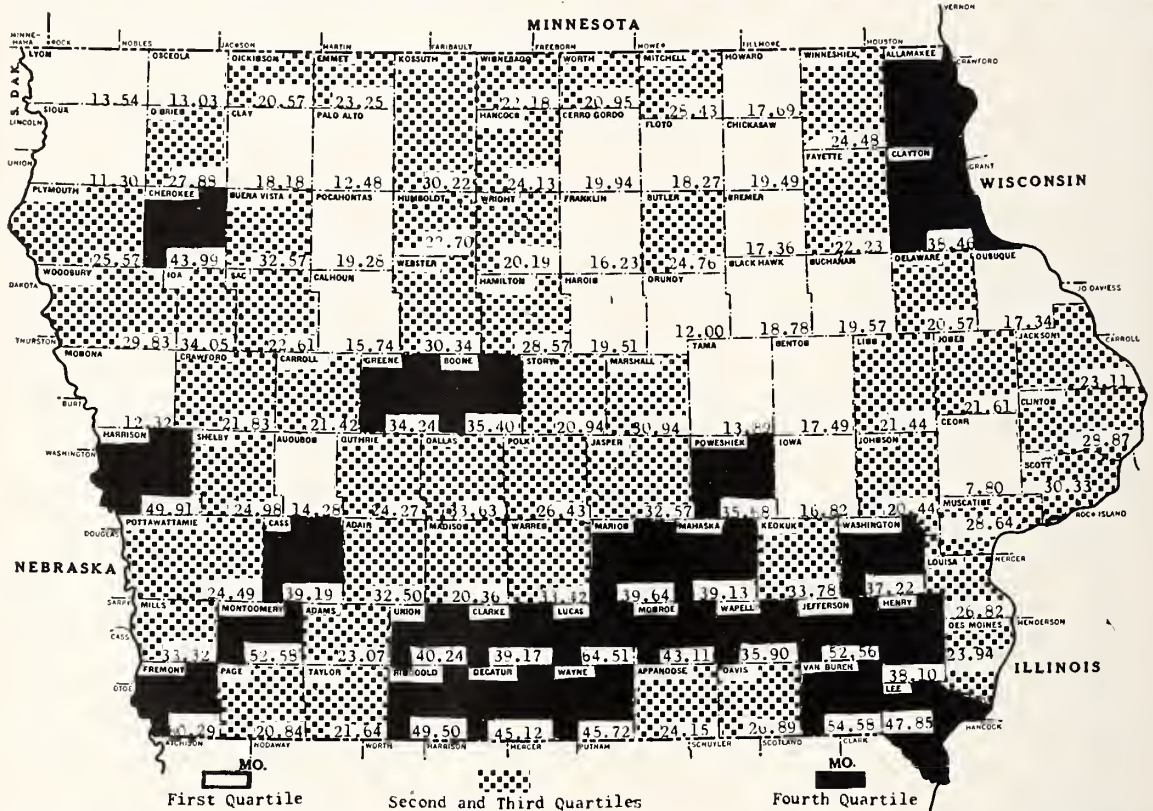
Proponents of increased federal funds for hospital construction drew further ammunition from an article by John W. Cronin, M.D., Chief of the hospital facilities division of USPHS in the January issue of *HOSPITALS*. Dr. Cronin estimates that the country today is 850,000 beds short of adequacy, and declares that, by adding more than 100,000 beds since 1946, the Hill-Burton program has effected only a slight net gain, because of the obsolescence of previously satisfactory facilities and because of the increase in population.

He predicts that hospital-building activity during 1954 will be moderately below what it was in 1953.

STATE DEPARTMENT OF HEALTH

Edmund G. Finnes
COMMISSIONER

COUNTY DEATH RATES FROM INFLUENZA AND PNEUMONIA PER 100,000 ESTIMATED POPULATION, 1950, 1951, 1952



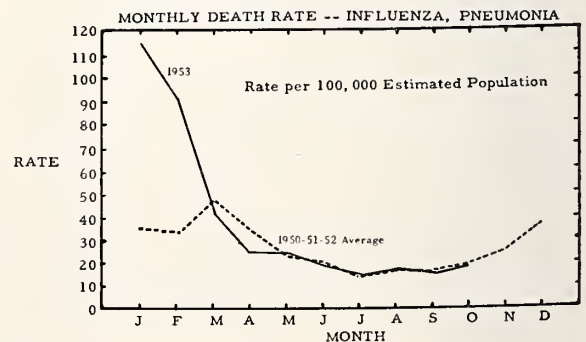
The state rate was 27.07 deaths per 100,000 population. For the counties, the 1st Quartile was 7.80-20.13; the 2nd Quartile 20.14-24.48; the 3rd Quartile 24.49-34.19; the 4th Quartile 34.20-64.51.

INFLUENZA AND PNEUMONIA

With the coming of the winter months, deaths from influenza and pneumonia generally increase. During the three-year period 1950-1952, there were 2,132 recorded deaths among Iowans from these two diseases. The median age of the decedents was 74.5 years. For males it was 70.9 years, and for females 78.1 years. Corresponding mean ages are 62.3, 59.5 and 65.8 years. The table following indicates the number of deaths by age group and sex.

As indicated in the accompanying map, southern Iowa has the highest crude death rate from pneumonia and influenza. The larger percentage of older people living in this area should, of course, not be overlooked. The graph indicates the seasonal differences in deaths resulting from influenza and pneumonia as well as the difference between the

monthly rate for the three year period 1950, 1951 and 1952 and the monthly rate for the first ten months of 1953. While the average annual rate for the three-year period is 27.1 deaths per 100,000



INFLUENZA AND PNEUMONIA DEATHS
BY AGE GROUP AND SEX

Age Group	Number of Deaths		
	Both Sexes	Males	Females
Under 5	330	196	134
5-9	25	17	8
10-14	17	11	6
15-19	11	7	4
20-24	10	6	4
25-29	15	7	8
30-34	15	10	5
35-39	22	10	12
40-44	31	19	12
45-49	42	33	9
50-54	54	37	17
55-59	69	50	19
60-64	85	63	22
65-69	160	105	55
70-74	197	119	78
75-79	259	131	128
80-84	324	163	161
85-89	263	115	148
90-94	134	60	74
95-99	59	23	36
100 plus	8	3	5
Unknown	2	1	1
All ages	2132	1186	946

estimated population, the 862 deaths for the first ten months indicate that a higher annual rate will be reached for 1953. A common cold many times is the forerunner of these respiratory diseases. Medical advice sought early can often ward off serious illness and possible death.

IOWA'S PROGRAM OF LABORATORY EVALUATION AND APPROVAL FOR SEROLOGIC TESTS FOR SYPHILIS

The State Hygienic Laboratory of the Iowa State Department of Health recently announced the results of its participation in the annual National Evaluation of Public Health Laboratories in Syphilis Serology. As in past years, the Iowa laboratory at Iowa City attained top ranking. The State Hygienic Laboratory rated first out of 36 participating laboratories in the performance of the V.D.R.L. (cardiolipin) test; first among eight participants with the Kolmer (Lipoidal) test, and placed second out of eleven laboratories in the Kline (Cardiolipin) test. This evaluation is conducted by the Venereal Disease Research Laboratory of the United States Public Health Service.

It is of interest to note further that the Iowa Laboratory equalled the specificity of each of the tests as performed by its author, and in each of them exceeded the sensitivity attained by its author.

The accepted standards for approval in the National Evaluation are that the participating laboratory must have a sensitivity of not more than 10 per cent below that of the control laboratory and

APPROVED PREMARITAL AND PRENATAL BLOOD TESTING LABORATORIES
July 1, 1953-June 30, 1954

No.	Name of Laboratory	Address of Laboratory	Physician in Charge	Tests Approved
<i>Cedar Rapids—Linn County</i>				
1.	Mercy Hospital Laboratory	835 6th Avenue, S.E.	R. E. Weland, M.D.	Kline-V.D.R.L.
2.	St. Luke's Hospital Laboratory	1026 "A" Avenue, N.E.	Francis C. Tucker, M.D.	Kline-V.D.R.L.-Kahn
<i>Council Bluffs—Pottawattamie Co.</i>				
3.	Council Bluffs Clinic Laboratory	503 First Avenue	Sydney A. Cohen, M.D.	Kline-V.D.R.L.
4.	Mercy Hospital Laboratory	420 E. Washington Ave.	A. S. Rubnitz, M.D.	Mazzini-V.D.R.L.
<i>Des Moines—Polk County</i>				
5.	The Anna T. A. Glomset Laboratory	1102 Equitable Bldg.	D. A. Glomset, M.D.	Kahn-V.D.R.L.
6.	U.S. Veterans Hospital Laboratory	30th and Euclid	T. E. Corcoran, M.D.	V.D.R.L.-Kahn
7.	Mercy Hospital Laboratory	5th and Ascension	F. C. Coleman, M.D.	V.D.R.L.-Kline
8.	The Medical Laboratory	310 Bankers Trust Bldg.	R. F. Birge, M.D.	Kline-V.D.R.L.
27.	Iowa Lutheran Hospital Laboratory	716 Parnell	Julius S. Weingart, M.D.	V.D.R.L.
28.	Iowa Methodist Hospital Laboratory	1200 Pleasant	Robert C. Dunn, M.D.	V.D.R.L.
<i>Dubuque—Dubuque County</i>				
9.	Laboratory of Medical Associates	1200 Main Street	Wayne A. Johnston, M.D.	V.D.R.L.-Kline
10.	Finley Hospital Laboratory	Allison Place	E. T. Thorsness, M.D.	V.D.R.L.-Kline
<i>Fort Dodge—Webster County</i>				
11.	Lutheran Hospital Laboratory	Lutheran Hill	Charles J. Baker, M.D.	Kahn-V.D.R.L.
12.	St. Joseph's Mercy Hosp. Laboratory	723 South 17th Street	Herbert Kersten, M.D.	V.D.R.L.
<i>Iowa City—Johnson County</i>				
13.	State Hygienic Laboratory	Medical Laboratories Bldg.	I. H. Borts, M.D.	
25.	U.S. Veteran's Hospital Laboratory	Iowa City	Kenneth Cross, M.D.	V.D.R.L.
<i>Mason City—Cerro Gordo County</i>				
14.	Laboratory of Harold M. Morgan	12 Brick & Tile Bldg.	Harold M. Morgan, M.D.	Kline-V.D.R.L.
15.	Laboratory of Park Hospital	102 N. Washington Ave.	L. R. Woodard	Kline
16.	St. Joseph's Mercy Hospital	180 Beaumont Drive	George T. Joyce, M.D.	V.D.R.L.-Mazzini
<i>Oskaloosa—Mahaska County</i>				
17.	Mahaska County Hosp. Laboratory	1229 C. Avenue, East	C. R. Phelps, M.D.	Kline
<i>Ottumwa—Wapello County</i>				
18.	Physician's Clinical Laboratories	211 E. Second Street	C. R. Phelps, M.D.	Kline-V.D.R.L.
26.	Ottumwa Hospital Laboratory	1001 E. Pennsylvania	C. R. Phelps, M.D.	Kline-V.D.R.L.
<i>Sioux City—Woodbury County</i>				
19.	St. Joseph's Mercy Hospital	2101 Court Street	Arne Knutsen, M.D.	Kline-V.D.R.L.-Kolmer
20.	Sioux City Laboratory	City Hall	C. P. McHugh, M.D.	V.D.R.L.-Kline-Kolmer
21.	Methodist Hospital Laboratory	29th and Douglas	A. C. Starry, M.D.	Kline-V.D.R.L.
<i>Waterloo—Black Hawk County</i>				
22.	Lutheran Hospital Laboratory	2714 Pierce Street	A. C. Starry, M.D.	Kahn-Kolmer
23.	St. Vincent's Hospital Laboratory	624 Jones	A. C. Starry, M.D.	Kline-V.D.R.L.
<i>Waterloo—Black Hawk County</i>				
29.	Black Hawk County Red Cross Blood Center	Waterloo	V. I. Sciscent, M.D.	Kahn
<i>Omaha, Nebraska</i>				
24.	Omaha Regional Blood Center	2549 Farnam Street	George L. Clark, M.D.	Kline-V.D.R.L.

The Iowa State Board of Health also approves the following laboratories for the purpose of performing serologic tests for syphilis in accordance with premarital requirements: Laboratories of all State and Territorial Health Departments; Laboratories of the United States Public Health Service, Army, Navy, Marine Corps, and the Health Department Laboratories of New York City and the District of Columbia.

must not have more than 1 per cent loss in specificity. The desired goal is 100 per cent specificity, with maximum sensitivity.

In the annual appraisal and evaluation of laboratories in Iowa for approval to perform serologic tests for syphilis as required by the Iowa Pre-marital and Prenatal Laws, standards similar to those outlined above are applied to the laboratories requesting appraisal.

The State Hygienic Laboratory performed 487,009 tests on the 250,359 serologic specimens received during the calendar year 1952.

Below is a brief outline of the State Hygienic Laboratory's results in the last three annual National Serologic Appraisals.

	1949		1950		1952	
	Sensit.	Specif.	Sensit.	Specif.	Sensit.	Specif.
	%	%	%	%	%	%
Kline Standard						
Author of Test	74.6	100.0	80.8	99.7	86.7	100.0
Iowa	79.6	99.7	83.0	100.0	87.1	100.0
Kolmer						
Author of Test	70.9	99.3	78.1	100.0	85.5	99.0
Iowa	74.5	99.3	75.8	100.0	85.7	99.0
V.D.R.L.						
Author of Test	69.2	99.3	71.9	100.0	78.1	100.0
Iowa	75.1	99.0	83.9	100.0	90.5	100.0

SIoux VALLEY SOCIETY MEETING

The annual meeting of the Sioux Valley Medical Society at the Hotel Martin, in Sioux City, on Tuesday, Wednesday and Thursday, February 23-25, 1954, is open to all physicians who wish to attend. The Iowa Academy of General Practice will permit each of its members who attend to allow himself ten formal credit hours. The program is as follows:

TUESDAY, FEBRUARY 23

- 8:00 P.M. Amos C. Michael, M.D., Vermillion, South Dakota, Professor of Pathology at the University of South Dakota: "Dehydration, With Emphasis on Possible Complications of Low Salt Diets."

(Members of the Woodbury County Medical Society will be hosts at a Dutch Lunch and Smoker following this paper.)

WEDNESDAY, FEBRUARY 24

- 8:30 A.M. Sound Movie: "Oxygen Dosage and Technics."
- 9:00 A.M. Egbert H. Fell, M.D., Chicago, Illinois: "Cardiac Arrest"—with striking color movies.
- 10:00 A.M. W. D. Paul, M.D., Iowa City, Associate Professor of Medicine at S.U.I.: "Antibiotic Therapy and Its Complications."
- 11:00 A.M. Charles K. Kirby, M.D., Philadelphia, Pennsylvania, Associate Professor of Surgery, University of Pennsylvania: "Neoplasms of the Lower Esophagus and Stomach, With Emphasis on the Management of Gastric Ulcers."

- 12:00 Noon. Medical and Surgical Luncheons, with Round-Table Discussions.

- 1:30 P.M. John P. Wendland, M.D., Minneapolis, Minnesota: "Diagnostic and Prognostic Significance of Retinal Findings in Hypertension."

- 2:30 P.M. Charles K. Kirby, M.D.: "Acute and Chronic Pancreatitis."

- 3:30 P.M. W. D. Paul, M.D.: "Arthritis."

- 5:30 P.M. Social Hour—Assembly Room.

- 7:00 P.M. Banquet (Informal—Ladies Expected) Address by Anton Hyden, M.D., Sioux Falls, South Dakota, President of the Sioux Valley Medical Association.

European Travelogue (1953) with three-dimensional colored pictures, by Omar Stauch, M.D., Sioux City, Iowa.

THURSDAY, FEBRUARY 25

- 8:30 A.M. Sound Movie: "The Exfoliative Cytologic Method in the Diagnosis of Gastric Cancer."

- 9:00 A.M. Charles D. May, M.D., Iowa City, Professor of Pediatrics at S.U.I.: Clinic—"Cystic Fibrosis of the Pancreas."

- 10:00 A.M. Louis Brunsting, M.D., Rochester, Minnesota, Professor of Dermatology and Syphilology at the University of Minnesota: "Systemic Lupus Erythematosis."

- 11:00 A.M. J. H. Randall, M.D., Professor of Obstetrics and Gynecology at S.U.I.: "Pelvic Endometriosis."

- 12:00 Noon. Luncheons: (1) Obstetrics, and (2) Pediatrics—Dermatological, with Round-Table Discussions.

- 1:30 P.M. Louis Brunsting, M.D.: "The Cancerous Dermatoses."

- 2:30 P.M. Charles D. May, M.D.: "The Cause and Treatment of Obesity in Childhood."

- 3:30 P.M. J. H. Randall, M.D.: "Complications of Labor."

MORBIDITY REPORT

Disease	Dec. 1953	Nov. 1953	Dec. 1952	Most cases reported from these counties:
Diphtheria	2	2	2	scattered
Scarlet Fever	125	71	120	Union, Woodbury
Typhoid Fever	1	1	0	Buena Vista
Smallpox	0	0	0	
Measles	461	284	373	Dubuque, Franklin
Whooping Cough	111	111	22	Union
Chickenpox	414	307	704	Boone, Clinton, Des Moines, Dubuque
Brucellosis	18	21	22	scattered
Meningitis Men.	3	1	3	scattered
Mumps	172	161	174	Boone, Cedar, Dubuque, Story
Poliomyelitis	14	40	39	Webster, Ida, others scattered; 4 paralytic, 4 non paralytic, 6 unspecified
Rabies in Animals	7	10	7	scattered
Infectious Hepatitis	162	141	79	Webster
Tuberculosis	32	67	42	For the State
Gonorrhea	63	55	38	For the State
Syphilis	133	151	57	For the State

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Publications Chairman*, Dexter, Iowa

President—MRS. EDWARD B. HOEVEN, 224 E. Alta Vista St., Ottumwa

President-Elect—MRS. LESTER R. HEGG, Rock Valley

Secretary—MRS. ROBERT P. MASON, 5818 Chamberlain Drive, Des Moines

Treasurer—MRS. HOWARD SMEAD, 3333 Grand Avenue, Des Moines

LINES FROM THE PRESIDENT

Happy New Year and sincere good wishes to all! To members of newly organized Plymouth and Shelby counties, a special greeting and a warm welcome! We know that you will find a rich reward in the service and good fellowship of your auxiliary.

Our membership is climbing, now. But all of us will have to double our efforts if we are to reach our goal—"every doctor's wife a member." Auxiliary membership should parallel that of the State Medical Society.

The A.M.A. is endeavoring to keep medical schools free from government control through its *Medical Education Fund*; the Auxiliary has been asked to assist in fund raising and to date has contributed \$32,629.29. Does this not seem important to you? Are you not proud to think that your dues have helped to swell the fund—make this gift possible? If every doctor's wife were a member, we could triple our contribution.

Dr. McCormick has said that there has been "little change in the trend toward socialism." And you know that this is true if you have been reading the A.M.A. Washington Letter and your newspapers. Government control of medicine is only a wish away from actuality. It can be imposed by senate ratification of a treaty written by the International Labor Organization or the Covenant on Human Rights; or it can come about in a painless way through the linking of the Veterans Administration with medical education.

Too many college students, coached by a new breed of professors, favor government supported and controlled medical schools; too few realize the meaning of "the American way." The challenging ideal of freedom to think, to work, to plan, to dream a dream, to stumble and fall and to rise again by one's own efforts has been sidetracked for the soft life of government-promised "security."

Frightening ism's have reached across the sea into our schools, our government, our churches and our press—ism's which are twisting the mind, the character and the soul of once free America. In many schools, children are being conditioned for socialism; they are being taught that, in preference to freedom, a government controlled and owned economy would be more efficient and better for the majority.

And yet the American people have been presented with a gift of twenty extra years of life by a profession free from the entangling tentacles of government interference. Excitement is building up with the certainty that polio is nearing a solution. And the never-ending fight against cancer goes on, night and day, all over the world. The story of medicine is a thrilling story! It is an inspiring story of dedicated men and women fighting against great odds, often giving their own lives in the struggle against ignorance and disease.

Doctors give more, in their every day practice, of financial contributions and personal service than almost any other group of citizens. Let us learn this story well and tell it enthusiastically whenever the opportunity presents itself.

MRS. EDWARD B. HOEVEN

MEMBERSHIP IN THE WOMAN'S AUXILIARY TO THE A.M.A. 1952-53

1. California	5213	27. Iowa	825
2. Pennsylvania . .	4565	28. Alabama	815
3. Texas	4472	29. Virginia	761
4. New York	4283	30. Arkansas	684
5. Ohio	4097	31. S. Carolina . . .	633
6. Indiana	2373	32. Mississippi . . .	633
7. Illinois	2360	33. Nebraska	494
8. Michigan	2249	34. Dis. Columbia .	447
9. Massachusetts .	1994	35. Maryland	426
10. Minnesota	1899	36. Arizona	424
11. New Jersey . .	1809	37. Rhode Island . .	388
12. N. Carolina . .	1761	38. N. Hampshire . .	331
13. Missouri	1621	39. Maine	315
14. Wisconsin	1456	40. S. Dakota	304
15. Washington . .	1402	41. Utah	300
16. Florida	1356	42. Idaho	290
17. Georgia	1350	43. Montana	286
18. Oregon	1169	44. N. Dakota	245
19. Connecticut . .	1091	45. Delaware	229
20. Kansas	1072	46. N. Mexico	226
21. Louisiana	1062	47. Hawaii	224
22. W. Virginia . .	1034	48. Wyoming	158
23. Oklahoma	972	49. Vermont	134
24. Tennessee	960	50. Nevada	105
25. Colorado	932	51. Alaska	34
26. Kentucky	853		

IDEAS FROM OTHER STATES

(1) Become thoroughly familiar with the needs of our medical schools and how the Fund works to meet this need then disseminate this information at every opportunity.

(2) Make yourself a committee of one to get pledges to the AMEF, not forgetting to pledge yourself.

(3) Encourage your Auxiliary to pledge a worthy amount annually.

(4) Encourage your husband to enroll in this campaign of education.

(5) Every dollar contributed goes to the school designated since all expense of the campaign is paid for by the Medical Association.

(6) Gifts are deductible from federal income tax.

(7) The Fund will be happy to receive memorial gifts and is in a position to accept funds willed to it from estates.—From "The Illinois Auxiliary News," Fall, 1953.

You can help raise funds by any of the means suggested below or any other means that are popular in your Auxiliary.

1. A piggy bank collection at each auxiliary meeting and/or one also at the medical society meeting.

2. White elephant sale at auxiliary meeting.

3. Medical Education Fund corsage.

4. Rummage sale.

5. Fashion show.

6. Bridge party.

7. Supper party (each member bringing food and charging \$1.00 or \$1.50 per plate).

8. Bake sale.

9. Dance.

10. Sew or make articles to sell at December meeting for Christmas.

11. Contribution from treasury.

12. Adding \$1.00 to your dues.

13. Gifts from individual members.

14. Designate the American Medical Education Foundation as a special committee in your Auxiliary and have them choose their own means of money raising.—From "The California Courier," Fall, 1953.

NOTES ON MEMBERSHIP CAMPAIGNING

1. Check with your Medical Society's roster and send an invitation, or call every eligible doctor's wife individually. Personal attention is a great help and everyone likes and appreciates it.

2. Members-at-large are the potential for new county Auxiliaries. Do not forget them. Make them welcome if your county is already organized.

3. County dues should be paid to the State Treasurer between March 1 and 15. She will send state dues to the National Treasurer between March 15 and 31. All 1952-1953 dues received between July 1, 1953, and June 30, 1954, are counted as current dues and determine listed membership.

4. There are approximately 76,000 eligible doctors' wives who are not members of the Auxiliary. Are you making the contacts which you should?

TWO NEW COUNTY AUXILIARIES ORGANIZED

At a dinner for the staff doctors and their wives given by the Sisters of Sacred Heart Hospital, Le Mars, on December 1, the Plymouth County Auxiliary was organized. The officers are all from Le Mars: Mrs. Frederick C. Bendixen, president; Mrs. Roman J. Fisch, vice president; Mrs. Harry L. Vander Stoep, secretary-treasurer.

Mrs. Lester R. Hegg, Rock Valley, President-Elect of the State Auxiliary, was present and gave a general picture of Auxiliary work in the state. The Sisters of Sacred Heart Hospital are hopeful that the new Auxiliary will be helpful as a hospital auxiliary.

On December 8, 1953, after a very enjoyable luncheon at the Hotel Saylor in Harlan, the temporary chairman, Mrs. R. E. Donlin, proceeded with the business of organization of a Woman's Auxiliary to the Shelby County Medical Society. Five charter members signed the membership roster. They are Mesdames Jos. H. Spearing, R. E. Donlin, Allen Ryan, Carl V. Bisgard and Laurence Larsen.

The following officers were duly installed by

Mrs. Charles H. Flynn, of Clarinda, state organization chairman: President, Mrs. C. V. Bisgard, of Harlan; Vice-president, Mrs. Edward Vosika, of Shelby; and Secretary-Treasurer, Mrs. J. H. Spearing, of Harlan.

Mrs. Edward B. Hoeven, state president, gave a short but very pertinent talk on the overall work of the state auxiliary and the correlation of county auxiliary work. Mrs. Charles H. Flynn gave a short talk on how the county auxiliary can assist with organization work, and she also read a letter to the group from Mrs. Dean King, program chairman. Mrs. Emil C. Petersen, district councilor, discussed the tentative plans for a district meeting to be held in Harlan with the newly organized auxiliary as hostesses in the early spring.

The group of women present were most enthusiastic about their new auxiliary and are discussing projects for the coming year. Some of them have already started helping with *TODAY'S HEALTH* by sending in gift subscriptions for Christmas.

POINTS ON PROGRAM PLANNING

If possible, print your programs for the year.

The suggestions from the National Program Committee of Woman's Auxiliary to the American Medical Association are worth repeating and cover the order to be pursued.

1. Promote friendliness and fellowship among physician wives and families and the lay public.
 2. Plan your programs on a yearly basis and have them approved by your advisory council.
 3. Use the Auxiliary Pledge of Loyalty at your County meetings.
 4. Consult your advisory council concerning the most urgent health problems in your community; adopt, adapt, and promote these health projects most suited to the need of your area.
 5. Do not use the insignia of other organizations.
 6. Be careful in your selection of speakers and be sure that they are not adverse to the principles of the Auxiliary.
 7. Obtain speakers trained in the field of the health projects undertaken by your Auxiliary.
 8. Maintain a county speakers' bureau and offer its services to other organizations, thus fostering good will and promoting public education.
 9. Plan some meeting relating to health and health education.
 10. Make your program short, interesting and varied.
 11. Plan a social hour, if possible. Acquaintance makes better working relations.
 12. Conduct a school of instruction (May Bulletin 1950) or maintain a committee of instruction in order to inform all members as well as officer personnel of the projects, duties, and responsibilities of an Auxiliary member.
 13. Know the association to which you are an auxiliary and you will render better service. Do the type and quality of work that will make your medical societies recognize you.
 14. Cooperate with your county and state medical society.
 15. Read the National Auxiliary Bulletin, exchange auxiliary publications, the Auxiliary pages in the A.M.A. Journal, State and County Medical Journals, National and State News Letters.
 16. Answer all correspondence promptly. Send in your program outlines in time for them to be included in State, Regional, and National Reports.
 17. Keep a file of program material for your successor.
 18. Take advantage of the program material available from the A.M.A. and the Auxiliary central office.
- If you feel your group is too small to rate a speaker, it might surprise you what your members can do in the way of a program if given a subject to cover, for instance, the Twelve Point program of the A.M.A. for the advancement of medicine and health. (Copies available from the Bureau of

Health Education, 535 Dearborn St., Chicago 10, Illinois.)

Daily newspapers on local, state and national subjects can be source material or supply suggestion ideas to incorporate in programs.

Source material may be obtained on many subjects from the following:

Committee on Medical Motion Pictures, 535 N. Dearborn, Chicago 10, Illinois. Many interesting subjects, including nurse recruitment.

The Washington News Letter, 1523 L. St., N.W., Washington 5, D. C.

Secretary's Letter

Bulletin

Today's Health

Miss Margaret Wolfe

535 N. Dearborn St.

Chicago 10, Illinois

Commission on Chronic Illness, 535 N. Dearborn St., Chicago 10, Ill.

The Shearon Medical Legislative Service, 9127 Jones Mill Road, Chevy Chase 15, Md.

All the State and National Committee Chairmen, on their respective subjects.

A short talk in simple, well chosen words covering the important points of a subject will be remembered longer than a lengthy, learned address, and leave time for a social hour.

MEDICAL EDUCATION FUND AWARDS \$29,095 TO COLLEGE

The National Fund for Medical Education awarded \$29,095 to the SUI College of Medicine recently. This fund is the result of the recognition of the American Medical Association that provision of voluntary aid is the only means of preventing medical schools from becoming more and more dependent upon government subsidy.

One of the outstanding features about this money is that it provided a flexibility in its use. During the present year we have been able to employ eleven part time teaching fellows on this grant. These are young people working for their Ph.D. degrees. This fund makes it possible for them to complete their training in the basic sciences where there is a great need for trained personnel in medical schools. It was also possible to employ two assistants and two instructors, thus strengthening the teaching program.

Outside industrialists have been appointed by the National Fund to raise money from industry. While all groups of people are canvassed, the major response outside of industry has been from the medical profession. It is possible for any given donor to designate the school to which he would like to have his donation go.

The medical faculty at SUI is extremely grateful to those who have donated to the National Fund for Medical Education.—From "The Medical Bulletin of The State University of Iowa," Fall, 1953.

PHYSICALLY DISABLED IN HISTORY

ANCIENT WORLD—*Extermination*

Spartans and many other people of the ancient world killed their physically imperfect citizens. This was done because of superstition and the pressing necessity of group survival. The physically disabled person was a risk to the safety and economic well-being of the group.

MIDDLE AGES—*Ridicule*

Although the physically disabled were allowed to live during the Middle Ages, they were objects of ridicule and jesting. The court jesters of medieval society were often the deformed and the mentally weak.

RENAISSANCE—*Asylum*

Awareness of the public problem that the physically disabled presented was recognized to the extent of public provision of relief and public and private maintenance of asylums. A physical deformity was often confused with mental illness.

18TH CENTURY—*Physical and Custodial Care*

Earliest organized social interest in the welfare of the disabled came in the 18th century in the form of physical and custodial care. The first institution to devote its entire resources to the physical care of the disabled was established in Orbe, Switzerland, in 1780.

19TH CENTURY—*Education*

Not until the 19th century was any effort made to educate the physically handicapped. The first home to offer both care and educational facilities of the disabled was opened in Munich in 1820. After this start, public and private schools for handicapped children sprang up in Europe and the United States.

20TH CENTURY—*Total Rehabilitation*

The realization that care and education were not enough, that society must prepare the disabled to become self-supporting, resulted in establishment of the State-Federal Vocational Rehabilitation program in 1920. Since then, thousands of disabled persons have become useful, productive citizens of their communities. The latest step in the treatment of the disabled has been the establishment of rehabilitation centers for the severely disabled.

(Reprinted from volume 1, number 1 of The Rehabilitation Counselor, published by the Tennessee Vocational Rehabilitation Division. Appeared in May issue of Performance, Bulletin of The President's Committee on Employment of the Physically Handicapped.)

POLK

The 1954 officers of the Polk County Woman's Auxiliary, installed during December, are: Mrs.

Benjamin F. Kilgore, President; Mrs. Herbert C. Merillat, President-Elect; Mrs. L. K. Shepherd, Vice President; Mrs. Maurice H. Noun, Secretary; and Mrs. Elmer A. Voisek, Treasurer.

PROFIT FORECAST FOR REHABILITATION WORK

The 120,000-odd disabled men and women who were restored to earning power during 1952 and 1953 will more than repay the funds expended in their behalf within two and a half years, according to Miss Mary E. Switzer, of the Department of Health, Education and Welfare. The rehabilitation program in which federal and state governments have been cooperating cost \$23,000,000 during that period, but she expects that the beneficiaries will pay in excess of \$10,000,000 yearly in taxes on their earnings.

The year 1953 was the third in succession during which more than 60,000 persons were made self-supporting. The precise figure was 61,308. Approximately one-fifth of those had been on relief rolls, at an annual cost of \$8,000,000. The training or retraining of that group is estimated to have cost \$6,300,000.

SPEAKERS' BUREAU SCHEDULES

RADIO

WSUI—IOWA CITY

Tuesday at 11:45 a.m.

"THE STORY OF SURGERY"

February 2	Surgery and Cancer
February 9	Plastic Surgery
February 16	Surgery in Old Age
February 23	Surgery of the Thyroid Gland

WOI—AMES

Thursday at 11:15 a.m.

"MAIN STREET MEDICINE"

February 4	School Health
February 11	Four Year Medical School
February 18	Rural Doctor Supply
February 25	Healthful Living

TELEVISION

WOI-TV—AMES

Friday at 8:00 p.m.

February 5	Children's Dentistry
February 12	Adolescence
February 19	Dental Program
February 26	Pediatrics

COUNTY SOCIETIES

MEETINGS

Boone

The 1954 officers of the Boone County Medical Society, elected January 4, are: Dr. F. N. Johnson, of Boone, president; Dr. T. E. Kane, of Boone, vice president; and Dr. Ralph L. Wicks, of Boone, secretary-treasurer.

Calhoun

At the November meeting of the Calhoun County Medical Society, Dr. C. E. Knouf, of Lake City, was named president for 1954; Dr. D. C. Carver, of Rockwell City, vice president; and Dr. Ashton McCrary, of Lake City, secretary-treasurer. Dr. Paul Ferguson, of Lake City, will be delegate to the State Society's meeting, and Dr. W. C. Kennedy, of Somers, will be alternate.

Cerro Gordo

Dr. James W. Lannon, of Mason City, was elected president of the Cerro Gordo County Medical Society for 1954. Dr. Dean W. Clapsaddle, of Clear Lake, was chosen vice president; Dr. Lawrence C. Orton, of Mason City, treasurer; Dr. Robert C. Brown, of Mason City, secretary; Drs. Jay E. Houlahan and H. G. Marinos, both of Mason City, delegates to the State Society; and Dr. T. E. Davidson, of Mason City, alternate delegate.

Dallas-Guthrie

Dr. C. A. Nicol, of Panora, was elected president of the Dallas-Guthrie Medical Society on December 5. Dr. W. V. Thornburg, of Guthrie Center, and Dr. A. B. Cloud, of Guthrie Center, are to be vice president and secretary-treasurer, respectively.

Davis

Dr. S. R. Jaskunas, was chosen president of the Davis County Medical Society at the annual meeting held on December 28. Other officers for 1954 include Dr. J. R. Scheibe, vice president; and Dr. W. D. Haufe, secretary-treasurer. Dr. Paul T. Meyers and Dr. Richard Schoonover were named delegates to the State Society's annual meeting. All live in Bloomfield.

Des Moines

On January 12, the 1954 officers of the Des

Moines County Medical Society were installed. They are: Dr. Robert Moerke, president; Dr. G. D. Jenkins, vice president; Dr. Robert Rowley, secretary; and Dr. Donal Peterson, treasurer. Two Waterloo physicians, Dr. Fred Loomis and Dr. Mark Kuhn, discussed changes in the Blue Cross and Blue Shield insurance plans at the meeting.

Dubuque

Dr. J. E. Bacon has been elected president of the Dubuque County Medical Society, it was announced December 10. Other officers for 1954 are Dr. Anthony C. Pfohl, first vice president; Dr. Charles C. Griffin, of Dyersville, second vice president; Dr. Clarke W. Stevens, treasurer; and Dr. Joseph J. Straub, secretary. Delegates to the annual meeting of the State Society are to be Dr. D. C. Konzett, Dr. Donovan S. Ward and Dr. Robert J. McNamara, all of Dubuque, and the alternates are to be Dr. M. S. Lagen, Dr. L. F. Steffens and Dr. Paul J. Laube.

Jefferson

Dr. John W. Castell was elected president of the Jefferson County Medical Association at a meeting held on December 10. Dr. K. G. Cook was named vice president, and Dr. F. H. McClurg was re-elected secretary-treasurer. The delegates to the State Society's spring meeting will be Dr. Roy A. McGuire and Dr. L. D. James.

Johnson

The staff of the Iowa City Veterans Hospital entertained the Johnson County Medical Society at dinner on January 6 and provided a scientific program on the topic "Clinical Management of Certain Pulmonary Diseases."

Lyon

The new officers of the Lyon County Medical Society, elected on December 29, are: Dr. H. H. Gessford, of George, president; Dr. S. H. Cook, of Rock Rapids, secretary-treasurer.

Marshall

Dr. G. E. Mountain, of Des Moines, talked on "Management of Coronary Thrombosis" at the Jan-

uary 5 meeting of the Marshall County Medical Society.

Muscatine

The 1954 officers of the Muscatine County Medical Society are to be Dr. W. W. Daut, president; Dr. G. A. Sywassink, vice president; and Dr. T. M. Miller, secretary-treasurer. All of them practice in Muscatine.

Pocahontas

New officers of the Pocahontas County Medical Society are Dr. J. M. Rhodes, of Pocahontas, president; Dr. E. O. Loxterkamp, of Rolfe, vice president; and Dr. Charles Jones, of Gilmore City, secretary-treasurer.

Polk

The staff of Iowa Lutheran Hospital were hosts to the members of the Polk County Medical Society at dinner on December 16, and, afterwards, provided a modified clinico-pathologic conference as the scientific portion of the meeting.

Sac

At the December 10 meeting of the Sac County Medical Society, Dr. L. J. O'Brien, of Fort Dodge, spoke on "Fractures About the Ankle Joint." Dr. J. H. Stalford, of Sac City, was elected president of the society for 1954; and Dr. John Hubick, of Odebolt, was elected secretary.

Tama

Dr. R. E. Dunn, of Dysart, Dr. G. M. Dalbey, of Traer, and Dr. A. J. Havlik, of Tama, were elected president, vice president and secretary-treasurer, respectively, at the December 29 meeting of the Tama County Society, in Toledo.

Taylor

Dr. W. H. Cash, of Lenox, was elected president of the Taylor County Medical Society, Dr. R. W. Boulden, of Lenox, was elected vice president, and Dr. G. W. Rimel, of Bedford, secretary-treasurer, at a meeting held December 21.

Wapello

Members of the Wapello County Medical Society and their guests heard Dr. Everett D. Sugarbaker, of Jefferson City and Columbia, Missouri, speak on "New Advances in Surgical Management of Cancer of the Breast," at a meeting held in the

tumor-clinic room of the Ottumwa Hospital, January 5. Doctors from Albia, Bloomfield, Centerville, Oskaloosa, Hedrick, Fairfield, Leon, Chariton, Farmington and Sigourney were among the 75 present.

Washington

Dr. C. A. Boice, of Washington, was elected president of the Washington County Medical Society at a meeting held on December 17, Dr. D. G. Sattler, of Kalona, was elected vice president, and Dr. W. S. Kyle, of Washington, secretary-treasurer.

Webster

Dr. Frank S. Larsen was re-elected president of the Webster County Medical Society for 1954. Dr. Paul L. Stitt and Dr. John R. Kersten were elected vice president and secretary; delegates to the State Society's annual meeting are to be Drs. Charles J. Baker and Hoyt H. Allen with Dr. H. H. Kersten as alternate.

Woodbury

Dr. Peirce D. Knott is the 1954 president of the Woodbury County Medical Society. The officers chosen for the new year on December 10 are: Dr. Philip L. Bettler, president-elect; Dr. John W. Bushnell, vice president; and Dr. Verne R. Heimann, secretary.

DEATHS

Dr. Edward Bideaux Rhomberg, 50, a Guttenberg physician for 20 years, died on December 18 at Mercy Hospital, in Dubuque. He had apparently recovered from a heart attack a week earlier.

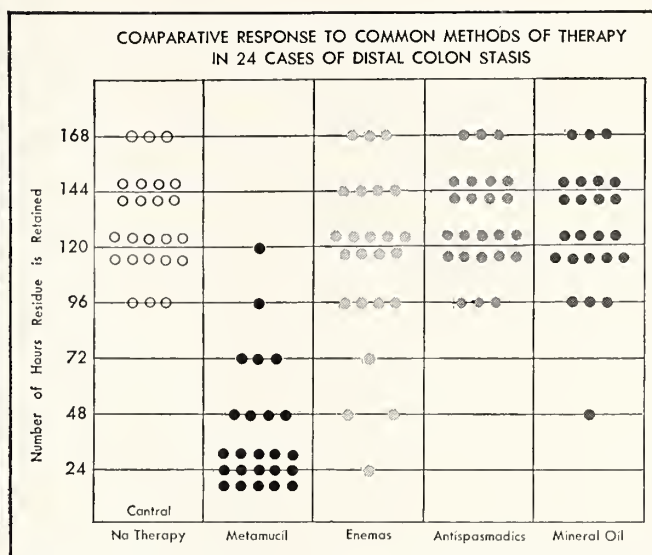
Dr. Judson William Myers, 64, physician at Postville for the past 20 years, died at his home there on December 16, of coronary occlusion. He was a member of the Allamakee County and Iowa State Medical Societies.

Dr. Emund David Russell, 93, who practiced medicine at Fort Dodge and at Clare for many years, died on December 27 at Milwaukee, Wisconsin. Dr. Russell and his wife have made their home there since 1944.

Dr. G. Hubert Artis, who practiced medicine for many years in Cedar Rapids, died on December 13 at his home in Los Angeles, California. He was a member of the Iowa State Medical Society from 1930 through 1948.



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Metamucil is the highly refined mucilloid of *Plantago ovata* (50%), a seed of the psyllium group, combined with dextrose (50%) as a dispersing agent. It produces smooth fecal bulk necessary to incite the normal peristaltic reflexes, without causing irritation, straining, impaction or interference with the

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SEARLE *Research in the Service of Medicine*

*Barowsky, H.: A Roentgenographic Evaluation of the Common Measures Employed in the Treatment of Colonic Stasis. *Rev. Gastroenterol.* 19:154 (Feb.) 1952.

Cook County Graduate School of Medicine

Postgraduate Courses

SURGERY—Intensive Course in Surgical Technic, Two Weeks, starting February 22, March 8, April 5

Surgical Technic, Surgical Anatomy & Clinical Surgery, Four Weeks, starting March 8

Surgical Anatomy & Clinical Surgery, Two Weeks, starting March 22

Surgery of Colon & Rectum, One Week, starting March 1

Fractures & Traumatic Surgery, Two Weeks, starting March 1

Gallbladder Surgery, Ten Hours, starting April 12

Basic Principles in General Surgery, Two Weeks, starting March 29

GYNECOLOGY—Gynecology Course, Two Weeks, starting March 15

Vaginal Approach to Pelvic Surgery, One Week, starting March 1

OBSTETRICS—Obstetrics Course, Two Weeks, starting March 1

Combined Course in Gynecology & Obstetrics, Three Weeks, starting April 19

MEDICINE—Two-week Intensive Course starting May 3

Electrocardiography & Heart Disease, Two Weeks, starting March 15

PEDIATRICS—Congenital & Rheumatic Heart Disease in Infants & Children, One Week, starting April 19 and April 26

UROLOGY—Intensive Course, Two Weeks, starting April 19

Ten-Day practical course in Cystoscopy every two weeks

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Address: Registrar, 707 South Wood St., Chicago 12, Ill.

The Month in Washington

Although the budget, defense and farm policy are monopolizing Washington headlines, Congress is paying more than casual attention to the health and social security fields. In these, as in other legislative areas, it has for its guidance a specific program, laid down by President Eisenhower in his various messages during the first few weeks of the session. The question now is whether this closely-divided Congress will have the time and/or the inclination to follow through on everything the Administration wants.

Before Congress settled down to its task, the President met with a group of American Medical Association leaders, who discussed with him the Association's position on several important pieces of legislation. Present at the White House meeting, in addition to Mr. Eisenhower and Sherman Adams, Assistant to the President, were A.M.A. President Edward J. McCormick, Trustees' Chairman Dwight H. Murray, President-Elect Walter B. Martin, and Washington Office Director Frank E. Wilson.

Congress got into the health and welfare field with no waste of time. Within five days after Congress reconvened the House Interstate and Foreign Commerce Committee, under the chairmanship of Rep. Charles Wolverton (R., N.J.), began an exhaustive series of hearings on voluntary health insurance, further evidence that the administration is determined to get some action in this direction.

Chairman Wolverton as long as four years ago was interested in legislation to help pre-paid insurance programs extend their coverage and increase their benefits. In 1950 he incorporated his ideas in a bill, but it was not acted upon by the committee and was not revived until this year. Now the atmosphere is much more favorable for Mr. Wolverton's proposal. Not only is he chairman of the committee and his party in control of Congress, but his ideas have strong support from the Administration.

Basically the Wolverton idea is an FDIC for voluntary health insurance. In about the same way the Federal Deposit Insurance Corporation insures bank deposits up to a certain limit, the Wolverton program would insure (or re-insure) various types of hospital, surgical, and medical insurance programs. The proposal is for the federal government to set up a national health insurance underwriting corporation. To keep the corporation going, the member plans would contribute a certain percentage of their gross receipts, possibly 2 per cent.

With the national corporation underwriting unusual risks, the individual programs could offer

POSTGRADUATE COURSES

in

OPHTHALMOLOGY & OTOLARYNGOLOGY

April 5, 6, 7, 8 & 9, 1954

Guest Instructors:

FRANCIS HEED ADLER, M.D., University of Pennsylvania.

FRANZ ALTMANN, M.D., Columbia University.

LEONARD CHRISTENSEN, M.D., University of Oregon.

JEROME A. HILGER, M.D., University of Minnesota.

WILLIAM F. HUGHES, JR., M.D., University of Illinois.

LE ROY A. SCHALL, M.D., Harvard Medical School.

ANESTHESIOLOGY

April 12, 13 & 14, 1954

Guest Instructors:

VINCENT J. COLLINS, M.D., St. Vincent's Hospital, New York City.

STUART C. CULLEN, M.D., State University of Iowa.

EDWIN J. DE BEER, Ph.D., Wellcome Research Laboratories, Tuckahoe, N. Y.

M. DIGBY LEIGH, M.D., Vancouver General Hospital.

JOHN S. LUNDY, M.D., University of Minnesota Graduate School.

O. SIDNEY ORTH, M.D., University of Wisconsin.

MAX S. SADOVE, M.D., University of Illinois.

SCOTT M. SMITH, M.D., Utah University.

ELWYN L. CADY, JR., LL.B., University of Kansas City School of Law.

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catastrophic or "complete" coverage. By scaling individual premiums to the family income, the member plans also could offer protection to families with very low incomes. The national corporation would pay possibly two-thirds of each subscriber's claim in excess of, say, \$500 or \$1,000 in any one year.

Another piece of legislation, receiving favorable attention, also would help families with their medical expenses—a proposed liberalization of income tax deductions allowed for medical expenses. Under present law, only that part of medical expense exceeding 5 per cent of taxable income may be deducted. The pending legislation would drop this to probably 3 per cent, and raise or eliminate the maximum limit. In past years scores of bills pointed in this direction have been introduced. If this is incorporated in the general tax overhaul legislation, it is believed to have a good chance of enactment.

Secretary Hobby's Department of Health, Education and Welfare is firmly behind a proposal to have the federal government show more leadership in vocational rehabilitation of the handicapped. At this writing it is too early for any good indication as to whether physicians will be brought under social security. The administration's bill would blanket in most self-employed groups, including dentists, attorneys, architects and farmers, in addition to physicians. Rep. Carl Curtis (R., Neb.), chairman of the subcommittee which investigated social security, apparently feels the same way. However, a substantial number of the members of the House Ways and Means Committee, which must pass on the bill, are known to feel that compulsion should not be used on groups that do not want Old Age and Survivors Insurance.

From all indications available during the first few weeks of Congress, a showdown fight may be unavoidable on medical care for military dependents. Defense Department, with support from the President, wants dependent care extended and made uniform among the three services, with military physicians carrying as much of the responsibility as they can. Under the Defense Department plan, dependents who could not be taken care of at military installations would be allowed to obtain their care from private sources, with the government paying almost all of the cost.

The American Medical Association agrees with the Defense Department that all dependents should receive medical benefits as nearly uniform as possible. However, AMA contends that wherever possible dependents should use private physicians and private hospitals, and that the military personnel and facilities should be employed only where civilian facilities are inadequate.

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PERSONALS

Dr. A. M. Hess has left his practice at West Union to undertake a residency in surgery at Des Moines.

The Sac County Medical Society and their wives honored **Dr. Lawrence D. Amick**, of Sac City, and **Dr. James McAllister**, of Odebolt, at a farewell dinner on December 28. Dr. Amick was about to leave for Rochester, Minnesota, where he has been granted a fellowship in physiatry, and Dr. McAllister had sold his practice preparatory to moving to Medford, Oregon.

Dr. Thomas G. Wellman has been made chief medical officer of the Veterans Administration Domiciliary Center at Clinton, replacing **Dr. Gerald P. Lawrence**, who, after four years' service at the Clinton facility, has been transferred to the Veterans Hospital at Miles City, Montana. Dr. Lawrence comes from the Domiciliary center at Wood, Wisconsin.

Medical Associates, of Dubuque, have announced the affiliation of **Dr. David A. Howell**, a specialist in the internal medicine.

On December 22, **Dr. A. J. Schroeder** terminated his practice in Marshalltown to take a residency in surgery at the Veterans Hospital in Iowa City. He expects to remain with the VA for at least the next four years, but eventually to return to Marshalltown, where he has been for 18 years.

Dr. Walter D. Abbott, of Des Moines, **Dr. George Perret**, of Iowa City, and **Dr. Stanton Goldstein**, of Davenport, have been chosen president, president-elect and secretary, respectively, of the newly formed Iowa Neurological Surgeons group.

Dr. Charles F. Oberman, former superintendent of the Cherokee State Hospital, has entered into the practice of psychiatry with **Dr. Moorman P. Prosser** at Oklahoma City, Oklahoma.

Dr. Herbert B. Allen, of New York City, has been appointed to the newly created post of medical director of the Maytag Company, at Newton. His duties will consist of treating occupational injuries and illnesses, and first-aid treatment of non-occupational injuries and illness.

In an automobile accident near Casey, that was fatal to the Adel real estate broker who was riding with him, **Dr. A. J. Mullmann**, of Perry, was seriously injured on December 24.

After a two-year tour of duty which included 12 months' service in Korea and five months' at an army unit hospital in Japan, **Dr. J. L. Wiedemeier** has announced his intention of resuming his practice in Sioux City.

Dr. Glen Knosp has joined **Dr. Frank A. Wilke** at the Perry Clinic. Dr. Knosp is a graduate of the University of Nebraska College of Medicine.

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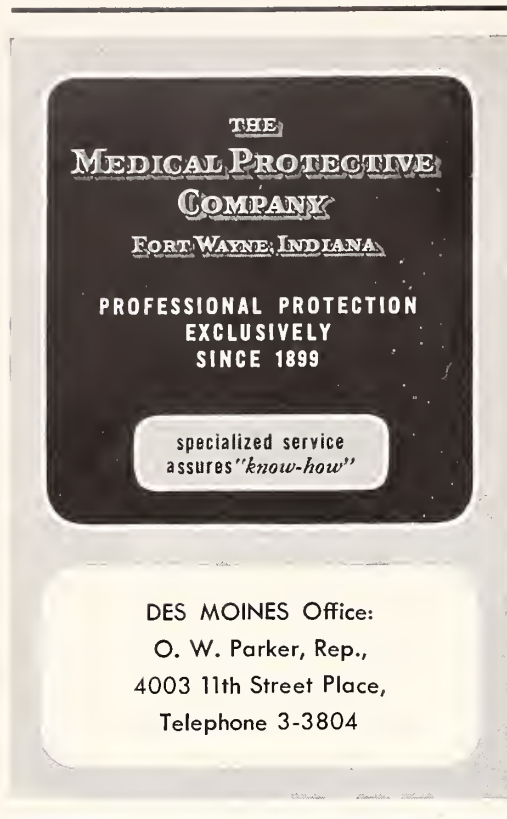
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Dr. Joseph F. Donahoe has returned to his association with **Drs. L. J. O'Brien** and **N. A. Schacht** at Fort Dodge, following a two-year tour of duty with the army medical corps. Since November, 1952, Dr. Donahoe has been medical examining officer at the induction center at Des Moines.

To undertake a four-year residency in pathology at Iowa Methodist Hospital, **Dr. Walter D. Anderson** has given up his private practice in Des Moines. He intends to continue as Polk County coroner.

Dr. Walter L. Bierring, of Des Moines, has been selected to receive a mastership in the American College of Physicians at a meeting to be held in Chicago on April 7. The title is usually awarded to former presidents of the ACP, but Dr. Bierring, a former vice president and regent of the college, is to be given it "as a recognition of personal character, positions of honor and influence, eminence in practice, contributions to organized medicine and other attainments in science and the art of medicine."

Fifty doctors, some of them from distant parts of Iowa, attended a dinner at the Des Moines Club on January 7 in honor of **Dr. Ransom D. Bernard**, who had retired a week before from the general managership of the Iowa State Medical Society. **Dr. Fred Sternagel**, of West Des Moines, was toastmaster, and **Dr. Martin Olsen**, of Des Moines, **Dr. Ben Whitaker**, of Boone, and **Dr. R. N. Larimer**, of Sioux City, were the speakers.

MEDICAL INTEREST BILLS BEFORE CONGRESS


In addition to the administration-sponsored bill to provide federal support for voluntary health-insurance plans, which is discussed in "The Month in Washington," in this issue of the JOURNAL, a number of bills held over from last session or yet to be introduced into Congress are of considerable interest to doctors of medicine.

Social Security Extension (H.R.6812, H.R.6846)

Congress will consider the administration's proposal for extending Old Age and Survivors Insurance to more than 10 million additional people, including physicians and others of the self-employed. The A.M.A. is opposed to compulsory coverage of physicians under OASI, contending that physicians could not expect to benefit from the plan, since very few of them retire at age 65.

Tax Deferrals for Annuities (H.R.10 and 11)

Instead, the A.M.A. has expressed its preference for legislation now pending before the House Ways and Means Committee under which the self-employed, including physicians, would be permitted



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*Stead, E. A., Jr., in Cecil, R. L., and Loeb, R. F.: Textbook of Medicine, ed. 8, Philadelphia, W. B. Saunders Co., 1951, p. 1065.

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deferral of income-tax payments on a limited portion of their earnings paid into restricted annuity plans. These proposals, known as the Jenkins-Keogh Bills, will be taken up when revisions of the income-tax law are considered.

Deductions for Medical Expenses (H.R.3911 and others)

Nearly a score of bills before the House Ways and Means Committee propose changing the income-tax law to permit larger deductions for medical expenses. At present, deductions of expenses are permitted only to the amount that they exceed five per cent of taxable income, and there are specific dollar limits—\$1,250 for each taxpayer, a like amount for each dependent, and a combined limit of \$5,000. The Association approves the permitting of larger deductions on the grounds that they would afford individual relief in cases of extremely high medical expenses and would also be an incentive for the purchase of voluntary health insurance.

Medical Care of Military Dependents (H.R.173, S.1495)

The Moulton Commission has recommended extension of medical care by physicians in uniform and at military hospitals to all military dependents. When necessary, the recommendation says that care should be purchased by the government from private physicians and hospitals, but servicemen should be charged no more than the token fees that would be necessary to prevent abuses. The all-military Womble Committee subsequently reported that a deterioration of career service could be halted only by such things as higher military pay and more medical and dental care for dependents. Several bills on the subject, and on Emergency Maternity and Infant Care (EMIC) for servicemen's families, are pending in Congress. Presumably little will be done on these measures until Congress has had a look at the new Defense Department bill.

Veterans' Medical Care (H.R.6015 and others)

Without waiting for Congress to act, the Veterans Administration last fall amended its forms to require additional financial data from veterans seeking hospitalization for non-service disabilities who state they can't afford private care. With or without congressional action in this field, new pressure may develop for broadening medical care via the presumption-of-service-connection route. More than a dozen bills before the House Veterans Affairs Committee would set up presumption of service-connection for certain diseases. Those were enumerated in the January JOURNAL.

The stand taken by organized medicine on this subject is as follows: (1) The VA should provide the best possible medical care for actual service-connected cases; (2) Until local and state facilities are adequate, long-term tuberculosis and psychiatric and neurological disorders, whether or not



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service-connected, should be hospitalized by VA when the veteran is unable to pay; and (3) All other non-service-connected cases are the responsibility of the veteran, his family, or his community. The A.M.A. generally has opposed bills unrealistically liberalizing presumption of service-connection.

Bricker Resolution (S.J.Res. 1 and others)

Almost certain to be taken up in this session is Senator Bricker's resolution providing for a constitutional amendment that would limit the treaty-making powers of the President. The bill, sponsored by 64 senators and endorsed by the A.M.A., would prevent international agreements on such subjects as socialized medicine from becoming domestic law without the approval of both houses of Congress. The proposal is opposed by the administration.

Benefits for the Disabled (S.2260, H.R.9 and others)

Before the Senate Finance and House Ways and Means Committees are a number of bills that would provide primary Old Age and Survivors Insurance payments to workers found to be totally and permanently disabled, and one that would provide full benefits on reaching age 65 to persons who were permanently disabled prior to their becoming eligible for them. The Association has actively opposed all measures so far presented on these two subjects, pointing out that (1) they

place too much authority on the federal government; (2) they needlessly subject the examining physician to criticisms and pressures; (3) they provide for compulsion; and (4) they constitute a further interference with the practice of medicine.

Transfer of Indian Hospitals to USPHS (H.R.303 and others)

The bill transferring administration of health services for U.S. Indians and operations of their hospitals from the Interior Department to the U.S. Public Health Service had reached the House consent calendar when Congress adjourned for Christmas. The A.M.A. favors the transfer as a means of improving facilities and medical care for beneficiaries.

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Arnold, K. E., Sioux City (Port Hueneme, Calif.)	Lt. (j.g.), U.S.N.R.
Bartholomew, R. D., Lake City (Walnut Creek, Calif.)	Lt. (j.g.), U.S.N.R.
Benton, J. S., Des Moines	1st Lt., A.U.S.
Bogle, W. C., Marion (Great Lakes, Ill.)	Lt., U.S.N.R.
Braateliën, N. T., Des Moines (Rock Island, Ill.)	1st Lt., U.S.A.F.

- Brennan, J. E., Des Moines
(Camp Pendleton, Calif.)Lt., U.S.N.R.
- Broman, J. A., Maquoketa
(Ft. Sill, Okla.) Capt., A.U.S.
- Buzan, E. F., Des Moines
(Yuma, Arizona)
- Christensen, J. R., Eagle Grove
(Palo Alto, California)Lt. A.U.S.
- Cline, H. L., Iowa City
(Denver, Colorado) A.U.S.
- Couchman, P. G., Des Moines
(Ft. Riley, Kansas)1st Lt., U.S.A.F.
- Daut, R. V., Davenport
(Westover Field, Massachusetts)Capt., U.S.A.F.
- Davidson, M. C., Emmetsburg
(El Paso, Tex.)Col., A.U.S.
- Dooly, J. E., Fort Dodge
(Pleasanton, Calif.)Capt., U.S.A.F.
- Dunseth, W. R., Kellogg
(APO San Francisco, Calif.)USAF
- Eckhardt, R. D., Iowa City
(Portsmouth, Virginia) Lt., U.S.N.R.
- Ehmke, Bruce C., Iowa City
(Hot Springs, Arkansas)1st Lt., A.U.S.
- Field, C. A., Cresco
(DeRidder, Louisiana)Capt., A.U.S.
- Garred, J. L., Whiting
(San Francisco, Calif.)Lt., U.S.N.R.
- Garred, W. P., Dow City
(San Francisco, Calif.)Lt. (j.g.), U.S.N.R.
- Giles, Francis E., Cresco
(Fort Bragg, North Carolina)A.U.S.
- Godbey, M. E., Mt. Pleasant
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- Gottsch, John E., Shenandoah
(MacDill A.F.B., Tampa, Florida)Capt. U.S.A.F.
- Gottsch, Joseph C., Shenandoah
(Randolph A.F.B., Texas)1st Lt., U.S.A.F.
- Haskell, J. G., Reinbeck
- Hickman, D. M., Indianola
(Alexandria, Louisiana) 1st Lt., U.S.A.F.
- Isham, R. B., OsageU.S.N.R.
- Iwen, G. W., Iowa City
- Jenkins, H. F., Ogden
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- Johnson, A. A., Jr., Council Bluffs
(Fort Worth, Texas)Capt., U.S.A.F.
- Johnson, M. H., Iowa City
(APO New York, N. Y.)Capt., A.U.S.
- Johnson, W. A., Emmetsburg
(Corona, California)Lt., U.S.N.R.
- Judiesch, K. J., Iowa City
(Ft. Sam Houston, Tex.)1st Lt., A.U.S.
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(Pearl Harbor, T. H.)Lt., U.S.N.R.
- Kuehn, W. G., Clarinda
(A.P.O. San Francisco, Calif.)Lt., U.S.N.R.
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- Kurth, R. J., Waterloo
(Minneapolis, Minn.)Capt., U.S.A.F.
- Larson, Erling, Jr., Des Moines
(Indianapolis, Indiana)Lt., U.S.N.R.
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(Corona, California)U.S.N.
- Leiter, E. R. K., Des Moines
(Bangor, Me.)Capt., U.S.A.F.
- McMahon, A. E., Jr., Des Moines
(Omaha, Nebraska)U.S.N.R.
- Martins, J. K., Waterloo
(Bayonne, N. J.) Lt., U.S.N.R.
- Maxwell, J. R., Iowa City
(Camp Stoneman, California)1st Lt., A.U.S.
- Middleton, W. H., Central City
(Bethesda, Maryland)U.S.N.R.
- Montgomery, A. E., Jefferson
(Phoenixville, Pa.)Lt. Col., A.U.S.
- Nielsen, G. E., Des Moines
(Topeka, Kan.) 1st Lt., U.S.A.F.
- Paul, R. E., Des Moines
(FPO San Francisco, Calif.)Lt., U.S.N.R.
- Perman, Harvey H., Forest City
(Yokasuka, Japan)U.S.N.
- Peterson, L. G., Holstein
(Camp Kilmer, N. J.)A.U.S.
- Pfaff, R. A., Dubuque
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- Pfeiffer, D. W., McGregor
(Ft. Sam Houston, Texas)A.U.S.
- Prendergast, L. J., Iowa City
(Oceanside, California) U.S.N.R.
- Province, Wm., Jr., Dubuque
(Long Beach, Calif.)U.S.N.R.
- Puntenney, A. W., Boone
(Portsmouth, Va.)Lt., U.S.N.R.
- Rhode, M. C., Iowa City
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- Rogers, Edward A., Anamosa (U.S.P.H.S. Hospital,
Seattle)
- Saunders, R. J., Colfax
(APO San Francisco, Calif.) 1st Lt., U.S.A.F.
- Schlichtemeier, E. O., Peterson
(FPO San Francisco, Calif.)Lt., U.S.N.R.
- Shaffer, F. J., Iowa City.....Col., U.S.A.F.
- Shulldberg, Arthur, Des Moines
(Gunter AFB, Ala.)1st Lt., U.S.A.F.
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(Colorado Springs, Colorado)A.U.S.
- Smith, C. B., Iowa City
(Bowling Green, Ky.)Capt., A.U.S.
- Sphonheimer, L. N., Donnellson
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(Hutchinson, Kansas)Lt. (jg) U.S.N.R.
- Stutsman, R. E., Washington
(Miami, Fla.)Cmdr., U.S.N.
- Sugioka, Kenneth, Iowa City
(Long Island, N. Y.) A.U.S.
- Theilen, E. O., Iowa City
(Washington, D. C.)Capt. A.U.S.
- Thompson, J. W., Ames
(Camp Breckinridge, Kentucky) Capt., A.U.S.
- Thornton, F. E., Des Moines
(Portsmouth, Va.)Lt. Cmdr., U.S.N.R.
- Troxel, J. F., Cedar Rapids
(APO New York, N. Y.)1st Lt., A.U.S.
- Uchiyama, J. K., Des Moines
(Wichita Falls, Texas) 1st Lt., U.S.A.F.
- von Lackum, L. S., Oelwein
(Great Lakes, Ill.)Lt., U.S.N.R.
- Voorhees, P. H., Ottumwa
(Jamaica, N. Y.)U.S.N.R.
- Wall, J. M., Boone
(Gunter AFB, Ala.)1st Lt., U.S.A.F.
- Walker, J. R., Waterloo
(Bethesda, Maryland) Lt., U.S.N.R.
- Walston, J. H., Graettinger
(Lackland A.F.B., Texas)1st Lt., U.S.A.F.
- Westly, J. S., Mason City
(F.P.O., New York City)Lt., U.S.N.R.
- *Wilkins, D. S., Iowa City
(APO San Francisco, Calif.)Capt., A.U.S.
- Wilson, Robert G., Missouri Valley
(San Antonio, Texas)Flight Surgeon
- Witte, H. J., Marathon
(San Francisco, Calif.)Lt. Col., A.U.S.
- Young, R. A., Clarion
(Ft. Sam Houston, Tex.)Capt., A.U.S.
- Zeilenga, R. H., Orange City
(Madison, Wisc.)1st Lt., U.S.A.F.
- Zoeckler, Samuel J., Des Moines
(Ft. Sam Houston, Texas)1st Lt., A.U.S.

Wrapped in sleep...wrapped in love

Day's end for tiny legs and arms . . . the bedtime story told, prayers said, the tired little body held for a moment's hug, then tucked into bed . . .

Seal the day now with her good-night kiss and let her drift away into slumber, safe and secure.

Security is the deepest need of our living, and its greatest reward. To provide it for those we love is a privilege possible only in a country like ours.

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The JOURNAL

of the

Iowa State Medical Society

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Vol. XLIV

DES MOINES, IOWA, MARCH, 1954

No. 3

IOWA STATE MEDICAL SOCIETY

Organized in 1850

1954 Annual Meeting

April 25-28

HOTEL FORT DES MOINES—DES MOINES, IOWA

★

Program of General Sessions

Monday Morning, April 26

Grand Ball Room

- 9:00 Greetings—
E. PARISH LOVEJOY, M.D., President, Polk County Medical Society
- Response—
CLYDE A. BOICE, M.D., Vice-President, Iowa State Medical Society
- 9:15 President's Address—
ROBERT N. LARIMER, M.D., Sioux City, President, Iowa State Medical Society
- 9:35 President-elect's Address—
GERALD V. CAUGHLAN, M.D., Council Bluffs, President-elect, Iowa State Medical Society
- 9:45 Awards of Merit
- 10:00 Erskine Memorial Lecture: The Extended Operation for Cancer With Particular Reference to Cancer of the Alimentary Tract—
OWEN H. WANGENSTEEN, M.D., Minneapolis, Professor of Surgery, University of Minnesota Medical School.
- 10:30 Recess to visit exhibits
- 11:00 The Unsteady Child—
DOUGLAS BUCHANAN, M.D., Chicago, Professor of Pediatric Neurology, University of Chicago
- 11:30 Current Trends in the Treatment of Peptic Ulcer—
JOSEPH B. KIRSNER, M.D., Chicago, Professor of Medicine, University of Chicago

Tuesday Morning, April 27

Grand Ball Room

- 9:00 Surgical Lesions of the Adrenal Glands—
JAMES T. PRIESTLEY, M.D., Rochester, Professor of Surgery, University of Minnesota Graduate School of Medicine
- 9:30 Fire and Explosion Hazards in Hospitals and Their Control—
GEORGE J. THOMAS, M.D., Pittsburgh, Assoc. Professor of Surgery and Chairman of the Section of Anesthesiology, University of Pittsburgh School of Medicine
- 10:00 Recess to visit exhibits
- 10:30 The Difficult Patient—
HOWARD P. ROME, M.D., Rochester
- 10:50 The Management of Common Fractures of the Extremities—
HENRY R. MCCARROLL, M.D., St. Louis, Ass't. Professor of Clinical Orthopedic Surgery, Washington University School of Medicine
- 11:10 Address—
WALTER B. MARTIN, M.D., Norfolk, President-elect, American Medical Association
- 11:30 Chest Disease in Office Practice—
EDWIN R. LEVINE, M.D., Chicago



ROBERT N. LARIMER, M.D.

President

Iowa State Medical Society

1953-1954

Program of General Sessions

Wednesday, April 28

Grand Ball Room

- 9:15 Use of Endocrines in the Management of Obstetrical Complications—
 WILLIS E. BROWN, M.D., Little Rock, Professor and Head, Department of Obstetrics and Gynecology, University of Arkansas Medical School
- 9:45 The Problem of Dysmenorrhea—
 PARKER K. HUGHES, M.D., Des Moines

10:05 Recess to visit exhibits

10:30 Use of Endocrines in Management of Functional Uterine Bleeding—

ALBERT W. DIDDLE, M.D., Knoxville, Tenn., Chief of Staff, East Tennessee Baptist Hospital

11:00 Installation of President: Report of House of Delegates

11:30 Adjournment

Program of Section Meetings

EYE, EAR, NOSE AND THROAT SECTION

VERNE R. HEIMANN, M.D., Sioux City
 Chairman

Monday Afternoon, April 26

Green Room—Hotel Fort Des Moines

- 2:00 Simplifying Technics in Avoiding and Treatment of Complications in Cataract Extractions—
 JUSTIN M. DONEGAN, M.D., Chicago, Head of the Department of Ophthalmology, Presbyterian Hospital
- 2:45 Explanations of the Complications at Cataract Surgery—
 FREDERICK C. BLODI, M.D., Iowa City
- 3:05 Recess
- 3:30 Question and Answer Period—
 JUSTIN M. DONEGAN, M.D., and FREDERICK C. BLODI, M.D.
- 4:00 Preliminary Report on Retinal Detachments—
 HOWARD OSTLER, M.D., Iowa City

Tuesday Afternoon, April 27

Green Room—Hotel Fort Des Moines

- 2:00 Idiopathic Dizziness—
 CLAIR M. KOS, M.D., Iowa City
- 2:30 Indications for Tracheotomies and Procedure in the Siouxland Polio Epidemic of 1952—
 WORTHY C. BODEN, M.D., Sioux City
- 3:00 Recess
- 3:30 Complications Arising in Tracheotomized Bulbar Poliomyelitis—
 WILLIAM P. DAVEY, M.D., Sioux City
- 4:00 General Discussion—Tracheotomies in Poliomyelitis—
 Department of Otolaryngology, College of Medicine, Iowa City

PEDIATRIC SECTION

MARYELDA ROCKWELL, M.D., Clinton
 Chairman

Monday, April 26

Des Moines Room—Hotel Savery

- 2:00 The Limp Child—
 DOUGLAS BUCHANAN, M.D., Chicago
- 2:30 Discussion of Dr. Buchanan's paper—
 JOHN T. BAKODY, M.D., Des Moines
- 2:45 General Discussion
- 3:00 Childhood Seizures—
 JOHN C. MACQUEEN, M.D., Iowa City
- 3:30 Discussion of Dr. MacQueen's paper by Doctors Buchanan and Bakody
- 4:00 Cerebral Palsy and Brain Damage in Pediatric Practice—
 ROBERT E. BRUNER, M.D., Kansas City Medical Director, Cerebral Palsy Center, Consultant in Cerebral Palsy for the Iowa Society for Crippled Children and Adults
- 4:30 General Discussion

OBSTETRIC SECTION

Tuesday, April 27

Des Moines Room—Hotel Savery

Symposium on Obstetrical Hemorrhage
 WILLIAM C. KEETTEL, M.D., Iowa City
 Moderator

- 2:00 Hemorrhage as a Cause of Maternal Deaths in Iowa—
 MADELENE M. DONNELLY, M.D., Des Moines
- 2:30 The Cause and Prevention of Postpartum Hemorrhage—
 ALBERT W. DIDDLE, M.D., Knoxville, Tenn.
- 3:00 The Treatment of Shock and Bleeding Tendencies in Obstetrical Patients—
 WILLIS E. BROWN, M.D., Little Rock
- 3:30 The Place of Manual Removal of the Placenta in Present Day Obstetrics—
 JOHN H. RANDALL, M.D., Iowa City
- 4:00 Case Presentation of Deaths Associated With Postpartum Hemorrhage—
 Discussion by panel and audience



WALTER B. MARTIN, M.D.
*President-Elect, American
Medical Association
Norfolk, Virginia*



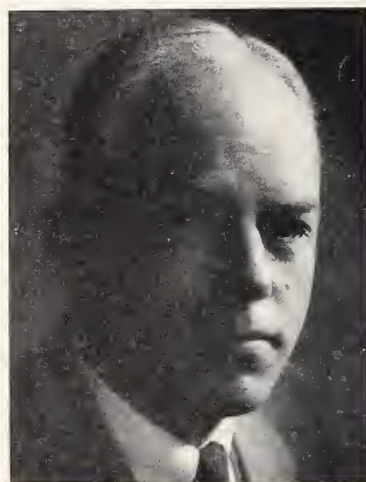
KARL H. PFUETZE, M.D.
Chicago, Illinois



HOWARD P. ROME, M.D.
Rochester, Minn.



HOWARD M. ODEL, M.D.
Rochester, Minn.



JAMES T. PRIESTLEY, M.D.
Rochester, Minn.

Program of Section Meetings

MEDICAL SECTION

RALPH E. SMILEY, M.D., Mason City
Chairman

Monday, April 26

Grand Ball Room—Hotel Fort Des Moines

- 2:00 Problems in the Management of Ulcerative Colitis—
JOSEPH B. KIRSNER, M.D., Chicago
- 2:30 Recent Advances in Internal Medicine—
WILLIAM B. BEAN, M.D., Iowa City
- 3:00 Recess to visit exhibits
- 3:30 Emergency Treatment of Paroxysmal Tachycardias—
LEWIS E. JANUARY, M.D., Iowa City
- 3:50 Heart Disease in Pregnancy—
GERALD F. KEOHEN, M.D., Dubuque
- 4:10 Recess (10 minutes)
- 4:20 Prodromal Symptoms of Myocardial Infarction—
HERMAN J. SMITH, M.D., Des Moines
- 4:40 Basic Considerations in the Treatment of Renal Disease—
HOWARD M. ODEL, M.D., Rochester

Tuesday, April 27

Grand Ball Room—Hotel Savery

- 2:00 Modern Methods in the Management of Emphysema—
EDWIN R. LEVINE, M.D., Chicago
- 2:30 The Role of the Family Physician in the Treatment of Tuberculosis—
KARL H. PFUETZE, M.D., Chicago, Medical Director and Superintendent, Chicago State Tuberculosis Sanitorium
- 2:50 Recess (10 minutes)
- 3:00 Problems and Prospects in Virus Immunization—
FLOYD S. MARKHAM, Ph.D., Pearl River, Research Associate, Lederle Laboratories, Viral & Rickettsial Research
- 3:30 Factors in the Causation of Recognizable Poliomyelitis—
FRANKLIN H. TOP, M.D., Iowa City
- 3:50 Recess (10 minutes)
- 4:00 Fever of Unknown Origin—
HORACE M. KORN, M.D., Iowa City
- 4:20 The Present Status of Cortisone and ACTH Therapy in Long Term Management of Bronchial Asthma—
PAUL M. SEEBOHM, M.D., Iowa City
- 4:40 Chronic Amebiasis in Iowa: Its Recognition and Treatment—
HENRY E. HAMILTON, M.D., Iowa City

SURGICAL SECTION

HOWARD I. DOWN, M.D., Sioux City
Chairman

Monday, April 26

Grand Ball Room—Hotel Savery

- 2:00 Surgical Treatment of Peptic Ulcer—
OWEN H. WANGENSTEEN, M.D., Minneapolis
- 2:30 Surgical Procedures for the Relief of Intractable Pain—
CARROLL A. BROWN, M.D., Sioux City
- 3:00 Recess
- 3:30 Cancer of the Thyroid Gland—
MARTIN A. BLACKSTONE, M.D., Sioux City
- 3:50 Diagnosis and Treatment of Anal Pruritus—
JOHN W. DULIN, M.D., Iowa City
- 4:10 Thrombo-embolism and Anti-coagulants in Surgery—
EDWARD E. MASON, M.D., Iowa City

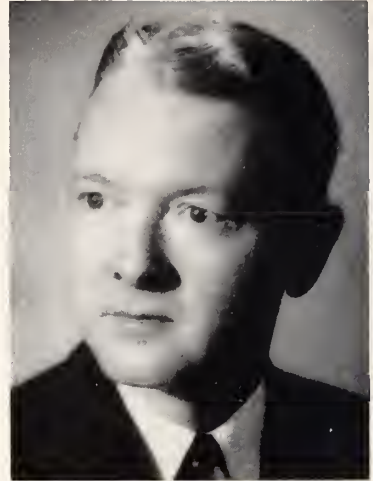
Tuesday, April 27

Grand Ball Room—Hotel Fort Des Moines

- 2:00 Surgical Lesions of the Pancreas With Particular Reference to Pancreatitis—
JAMES T. PRIESTLEY, M.D., Rochester
- 2:30 Diagnosis and Treatment of Tumors and Masses in the Neck—
ROBERT C. HICKEY, M.D., Iowa City
- 3:00 Recess to visit exhibits
- 3:30 Urologic Problems of Childhood—
DWAYNE E. HOWARD, M.D., Sioux City
- 3:50 Diagnosis and Treatment of Diverticulosis and Diverticulitis—
LAWRENCE O. ELY, M.D., Des Moines
- 4:10 Dupuytren's Contracture—
JULIAN M. BRUNER, M.D., Des Moines



OWEN H. WANGENSTEEN, M.D.
Minneapolis, Minn



JUSTIN M. DONEGAN, M.D.
Chicago, Illinois



EDWIN R. LEVINE, M.D.
Chicago, Illinois



GEORGE J. THOMAS, M.D.
Pittsburgh, Penn.



ALBERT W. DIDDLE, M.D.
Knorrville, Tenn.

Special Luncheons and Dinners

Monday, April 26

IOWA PEDIATRIC SOCIETY

Luncheon—12:00 noon
Des Moines Room—Hotel Savery
Social Hour and Dinner—6:30 p.m.
Hermitage Room—Des Moines Club
Reservations: R. E. Dyson, M.D.
3200 University, Des Moines 11

PAST PRESIDENTS' LUNCHEON

Luncheon—12:15 p.m.
Lantern Room—Hotel Fort Des Moines

BLUE SHIELD—BOARD OF DIRECTORS OF IOWA MEDICAL SERVICE

Breakfast—8:00 a.m.
Green Room—Hotel Fort Des Moines

BLUE SHIELD—PARTICIPATING PHYSICIANS

Annual Meeting—5:00 p.m.
Grand Ball Room—Hotel Fort Des Moines

IOWA SOCIETY OF ANESTHESIOLOGISTS

Business Meeting—2:00 p.m.
Social Hour and Dinner—5:30 p.m.
Arizona and Ranch Rooms—Hotel Fort Des Moines
Reservations: Thomas A. Bond, M.D.
707A Equitable Bldg., Des Moines

IOWA ASSOCIATION OF PATHOLOGISTS

Luncheon—12:15 p.m.
Harvest Room—Hotel Fort Des Moines
Reservations—T. E. Corcoran, M.D.
Veterans Hospital—Des Moines 10

IOWA RADIOLOGICAL SOCIETY

Luncheon—12:15 p.m.
Flamingo Room—Hotel Fort Des Moines
Social Hour and Dinner—6:00 p.m.
Colonial Room—Des Moines Club
Reservations: J. T. McMillan, M.D.
1105 Bankers Trust Bldg., Des Moines

Tuesday, April 27

AMERICAN MEDICAL WOMEN'S ASSOCIATION

Breakfast—8:00 a.m.
Dr. Nelle S. Noble
Reservations: Nelle S. Noble, M.D.
1060-25th Street, Des Moines

IOWA OBSTETRICAL SOCIETY

Luncheon—12:00 noon
Des Moines Room—Hotel Savery
Reservations: W. C. Keettel, M.D.
University Hospitals, Iowa City

IOWA ORTHOPEDIC SOCIETY

Luncheon—12:00 noon
Colonial Room—Des Moines Club
Reservations: E. M. George, M.D.
1010 Equitable Bldg., Des Moines 9

IOWA NEUROPSYCHIATRIC SOCIETY

Luncheon—12:00 noon
Flamingo Room—Hotel Fort Des Moines
Reservations: H. C. Merillat, M.D.
28th & Woodland, Des Moines 12

IOWA ACADEMY OF GENERAL PRACTICE

Luncheon—12:15 p.m.
Ranch Room—Hotel Fort Des Moines
Reservations: Mrs. Elizabeth Nelson
3600 Franklin, Des Moines

ANNUAL BANQUET

Grand Ball Room—Hotel Fort Des Moines
Dinner—7:00 p.m.

House of Delegates

Open to all members

First Meeting—Sunday Afternoon, April 25

2:00 p.m.

Grand Ball Room—Hotel Fort Des Moines

Roll Call
Approval of minutes of Wednesday morning session, 1953
Report of Officers
Reports of Committee Chairmen
Memorials and Communications
New Business
Election of Committee on Nominations

Second Meeting—Wednesday Morning, April 28

7:30 a.m.

Grand Ball Room—Hotel Fort Des Moines

Roll Call
Reading of Minutes
Report of Committee on Nominations
Election of Officers
Reports of Committees
Unfinished Business
New Business
Announcement of Committees
Adjournment

GOLF TOURNAMENT

Iowa State Medical Golf Association

The annual tournament will be held April 25, 1954. It is not definite at this time where it will be held. Watch for an announcement of the time and place of the tournament in the very near future.

H. J. McCoy, M.D.



FLOYD S. MARKHAM, Ph.D.
Pearl River, New York



ROBERT E. BRUNER, M.D.
Kansas City, Missouri



HENRY R. MCCARROLL, M.D.
St. Louis, Missouri



JOSEPH B. KIRSNER, M.D.
Chicago, Illinois



WILLIS E. BROWN, M.D.
Little Rock, Arkansas

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Selection of Patients for Gynecologic Surgery

J. ROBERT WILLSON, M.D.*

PHILADELPHIA, PENNSYLVANIA

ALTHOUGH A LARGE proportion of surgical procedures in women are directed toward the correction of presumed pelvic disease, the symptoms often are not relieved by operative therapy. In many instances the poor results stem from the fact that the symptoms for which the pelvic operation was performed were manifestations of dysfunction of an extrapelvic structure. In addition, the cyclic physiologic changes in the reproductive organs are often not recognized as normal phenomena, and the part played by the patient's emotions in the production of her symptoms often is overlooked. A carefully taken history, a thorough pelvic examination—under anesthesia if necessary—and, where possible, a period of observation and medical therapy preceding surgical intervention will reduce the total number of gynecologic operations by eliminating those which are unindicated and which, therefore, will be unsuccessful.

The terms *gynecology* and *pelvic surgery* are not synonymous, for the greatest part of gynecologic treatment is medical and is administered in the office rather than in the operating room. A desirable decrease in gynecologic operations has resulted from an increased understanding of functional alterations in the pelvic structures, from the development of potent endocrine preparations and antibiotic agents, from preventive obstetric measures such as episiotomy and the reduction in traumatic deliveries, and, in particular, from a recognition of the fact that many commonly performed pelvic surgical procedures did not relieve the conditions for which they were designed. In recent years, increasing appreciation of the role of the emotions in the production of pelvic symptoms has made the gynecologist wary of operation if such an etiologic factor is suspected. Patients with pelvic symptoms treated in the office by local therapy to the lower genital tract, by antibiotic or endocrine preparations or by correction of extrapelvic conditions should be far greater than those sent to the hospital for operation.

SELECTION OF PATIENTS FOR OPERATION

The symptoms which most often bring a female patient to her physician are pain, backache, bleeding, and difficulty in urination or in emptying the

bowel. While any one of these complaints *may* be the result of a lesion in the pelvic organs, they often are not. Before a pelvic operative procedure is considered, the presence of a definite genital tract abnormality must be established, and a reasonable certainty should exist that the proposed operation will relieve the symptom.

Uterine Enlargement: Most uterine enlargements are due to fibromyomata growing in the uterine wall. These tumors rarely undergo sarcomatous degeneration and do not predispose to the development of uterine carcinoma, and therefore their removal to prevent malignancy is unwarranted. Unless they press upon some adjacent structure or undergo a degenerative change they produce no pain, despite the fact that they may grow to great size. Increased uterine bleeding, which usually comes from the endometrium rather than from the tumor may be associated with submucous growths. But it will be brought under control automatically by the natural cessation of ovarian function at the menopause.

Most fibromyomata are small and asymptomatic, and need no treatment other than periodic observation, but removal of the uterus or of individual tumors becomes necessary if they are responsible for symptoms. Pain due to pressure or degeneration, increasing amounts of bleeding—particularly if it is enough to reduce the hemoglobin—a rapid increase in size of the tumors or a total mass larger than a uterus at the twelfth week of gestation suggest the need for treatment.

Uterine fibroids must be differentiated from enlargements due to pregnancy. A history of amenorrhea and a softened cervix and lower uterus will suggest pregnancy even though the size of the uterus is greatly increased by multiple fibroids, and the diagnosis must be clarified by means of a pregnancy test before operation is performed. Endometrial cancer may be present in a uterus enlarged by fibromyomata, but malignancy alone can produce a uterine enlargement which is difficult to differentiate from that due to myomata. Irregular periods and intermenstrual bleeding are more suggestive of malignancy than of uncomplicated fibroids. Hence, before a decision as to the treatment is made, a diagnostic curettage to eliminate corpus carcinoma must be performed.

Since cessation of growth or even regression in size of fibroids can be anticipated with the termi-

* From the Department of Obstetrics and Gynecology, The Temple University School of Medicine and The Temple University Hospital, Philadelphia, Pa.

nation of ovarian function, those which enlarge the uterus only slightly or those with which there is but a slight increase in bleeding ordinarily may be observed with the expectation that the growth and bleeding will cease after the menopause. Malignant lesions as a cause of irregular bleeding must be eliminated by uterine curettage and cervical biopsy if the patient is to be followed without treatment.

Ovarian Enlargements: True ovarian neoplasms occur relatively infrequently. Indeed they account for fewer than 2 per cent of pelvic operations in the Temple University Hospital. But because of the high mortality associated with ovarian carcinoma, their early recognition is important. Ovarian tumors are relatively symptomless until they reach a large size. Only the rare endocrine-producing neoplasms alter the menstrual flow or produce uterine bleeding, and pain is usually the result of an accident, such as torsion of the pedicle or hemorrhage into the cyst. Although small "cystic" ovaries are frequently suspected of producing abdominal pain, backache and menstrual irregularities, they seldom do and almost always are normally functioning structures.

An understanding of ovarian physiology should reduce the incidence of surgical removal of the normal and symptomless ovary. The growing follicle reaches its maximum size about two weeks before menstruation, just prior to ovulation, and upon palpation at this time the ovary may be enlarged to a diameter of as much as four centimeters. It is tender and actually feels cystic. Following rupture of the follicle, the ovary returns to its normal size. Enlargement may recur as the corpus luteum develops and may become quite evident if the patient becomes pregnant. Thus, during the menstrual cycle the normal expansion and regression in ovarian size can be palpated by repeated examination. The maximum physiologic enlargement of the ovary is to about 5 centimeters, but almost all ovaries smaller than this are normal.

Because true ovarian neoplasms produce no early symptoms, they seldom are found before they have reached considerable size, almost all being more than 5 centimeters in diameter when first discovered. In most instances, therefore, if an ovarian abnormality is suspected, but enlargement is slight, the change is of physiologic origin and not responsible for any symptoms which may be present. Operation is contraindicated until continued growth of the mass has been demonstrated by repeated pelvic examination. The need for prompt operation is suggested, however, if the ovary is larger than 5 centimeters in diameter, particularly if the enlargement is due to a solid growth. If an ovarian tumor twists upon its pedicle, thereby eliminating its blood supply, severe pain and necrosis develop, and immediate laparotomy is necessary.

Ascites may be present in association with any type of ovarian neoplasm, and an essential part of the evaluation of any female patient in whom the cause of an abdominal fluid collection is not obvious is a careful pelvic examination after paracentesis has been performed.

Pelvic Relaxation. Many women may be found to have a definite decrease in vaginal-wall support, or even huge cystoceles or rectoceles with almost no symptoms. Since the purpose of operative treatment for relaxation of the pelvic supporting structures is to relieve symptoms, therapy ordinarily is necessary only if the patient is uncomfortable. Bladder-wall and bladder-neck relaxation may be associated with urinary frequency, urgency, stress urinary incontinence or episodes of repeated urinary tract infection. Urinary incontinence may be due to loss of sphincter control, to urinary tract fistulae or to a neurologic lesion producing an autonomic bladder, and it is important to determine the exact cause before treatment is considered. Urine leakage due to muscular relaxation is produced by the increase in intravesicle pressure which occurs during coughing, sneezing, laughing, etc. It often is more noticeable during menstruation, and usually becomes progressively more pronounced as the patient grows older. The presence of stress urinary incontinence does not always indicate the need for surgical therapy. In the absence of marked descensus of the bladder and uterus, systematic exercises of the pubococcygeus muscles, as suggested by Kegel, may improve urinary control remarkably.

Patients with fistulae may be incontinent at all times, or if the defect is small, may be dry when lying down. If the opening is small, urine may be voided through the urethra in addition to the vaginal seepage. If the suspected fistula cannot be seen by vaginal inspection, its presence can be confirmed by placing a small pack in the vagina and injecting methylene blue into the bladder. If there is a defect in the bladder wall, the blue urine will seep through it and stain the vaginal pack. If the bladder wall is intact and the incontinence is due to ureterovaginal fistula, none of the dye injected into the bladder will enter the vagina, but if indigo-carmin has been injected intravenously, it will have stained the pack, since it will have been excreted through the abnormal ureterovaginal opening, as well as into the bladder through the normal ureter. A cord bladder can be suspected if small amounts of urine are voided frequently while the bladder remains distended, and it can be confirmed by cystometric studies. In patients with neurologic lesions gynecologic operations to correct incontinence are contraindicated.

Rectoceles usually interfere with the emptying of the bowel, and the patient may complain of "constipation." On examination, one notes that the perineal body, which ordinarily aids in directing the fecal flow through the anal canal, has been

completely destroyed and that, with a finger inserted through the anus, the rectum and posterior vaginal wall can be everted several centimeters through the vaginal introitus. Reconstruction of the posterior vagina and perineal body usually is indicated, since it will restore anatomic integrity and normal function of the lower bowel.

Uterine prolapse may produce a dragging, bearing-down sensation due to descent of the uterus and tension on its ligaments and the other pelvic structures after the patient has been on her feet for some time. The symptoms are usually relieved by lying down. The severity of the symptoms does not always indicate the extent of the prolapse, since slight descent sometimes produces marked discomfort even though complete vaginal eversion may be responsible for only minor complaints. Should there be a question as to the relationship between the symptoms and minor degrees of prolapse, a trial with a pessary may be helpful. Relief from symptoms while the uterus is supported by a pessary suggests that operative treatment will be successful.

In general, operative correction of vaginal relaxation should be reserved for those patients made uncomfortable by the lesion and in whom there is definite evidence that the symptoms are the result of the defect. Young women with large lesions and only moderate symptoms should often be considered for surgical correction because the relaxation frequently becomes more pronounced after the cessation of ovarian function at the menopause. Almost all vaginal relaxations can be corrected by a vaginal operation alone, and, in general, surgical therapy in a healthy woman at almost any age is preferable to a pessary to support a prolapsed uterus.

Uterine Displacements: Retrodisplacement of the uterus rarely produces symptoms and usually requires no treatment, but occasionally it must be eliminated as the cause of a specific pelvic complaint. If it is suspected that a retroverted uterus is responsible for symptoms, it should be replaced, under anesthesia if necessary, and supported with a pessary. If the posterior position of the uterus is the responsible factor, the symptom will be relieved while the pessary is in place and will return when it is removed and the uterus again falls backward. If this sequence of events follows the insertion and removal of a pessary on two or more occasions, a uterine suspension operation may be considered. If the pessary fails to relieve the symptoms or if they are improved with the pessary in place but fail to recur after it is removed, even though the uterus returns to its posterior position, suspension is contraindicated. Suspension operations, although commonly performed, are rarely indicated because the retrodisplaced uterus produces discomfort only in the rare instance in which it is bound down by adhesions

from adnexal inflammation or from endometriosis.

Bleeding: Uterine bleeding constitutes a common indication for gynecologic surgical procedures, but careful study to determine the source and cause of the bleeding is necessary before operation is advised. Complete preoperative investigation of the patients will eliminate those with abortions, carcinomas or other causes of bleeding in which ordinary measures are contraindicated. Need for treatment is indicated by the amount of blood lost. The history alone provides an inaccurate means of determining the amount of uterine bleeding, but if excessive blood loss can be documented by discovering a fall in blood count or by actually weighing the saturated pads or measuring the amount of clots, the need for therapy can be justified. Excess bleeding may be associated with alterations in metabolism. Hence, determination of the basal metabolic rate may be an aid in determining the cause. A consideration of emotional as well as of physical factors in the bleeding is important.

A decision as to how extensive an operative procedure is necessary to control bleeding must often be delayed until the patient can be examined under anesthesia, for unsuspected abnormalities may then be found. Dilatation and curettage are often helpful in determining the cause of bleeding and are necessary to rule out cancer in any woman with abnormal bleeding after the age of 35. But in young girls, little can be learned from the procedure, and it is contraindicated except as an aid in controlling severe hemorrhage. In many instances the diagnostic curettage also serves as therapy and may be all that is necessary to control the bleeding. Hysterectomy should be reserved for those patients with large fibroids and associated heavy bleeding, for profuse bleeding in young women after all other methods for control have failed and for selected patients with climacteric bleeding, particularly if there is additional pathologic change in the uterus or the adnexa.

Ovarian lesions are rarely responsible for abnormal uterine bleeding, and operations on "cystic ovaries" in patients who are bleeding irregularly are definitely contraindicated. Feminizing ovarian tumors may cause bleeding because of their estrogen secretion, but they are exceedingly rare.

Pain: Abdominal pain occurs commonly in women and is difficult to evaluate accurately, but more often than not the complaints are due to extrapelvic pathologic change. Pain from functional bowel distress is common and can be suspected if it is generalized, spasmodic, of varying severity, of long duration, unrelated to menstruation and associated with flatulence or constipation. The colon may be tender to abdominal palpation and the cecum hyperresonant; the pelvic organs

usually are normal, but rectal tenderness may be present. Such patients make up a high percentage of those unrelieved after having been operated upon for "cystic ovaries" or "chronic appendicitis." Operation is almost never immediately necessary if the complaints are of a mild, chronic nature. If no definite pelvic abnormality can be detected, a trial period on a low-fiber diet, an antispasmodic preparation and perhaps thyroid extract, if the symptoms suggest reduced metabolism, will ordinarily relieve the complaint. Emotional problems often incident to frigidity, dyspareunia and anxiety may be the fundamental factor in pain production.

The gynecologic conditions which produce pain are twisted ovarian neoplasms, inflammatory adnexal lesions, degenerated fibroids, endometriosis, pelvic tumors impacted against another structure, accidents of pregnancy and other causes of intra-abdominal bleeding such as ruptured corpus luteum or follicle cysts. Most of these are obvious at examination. If a tumor mass is palpable and tender to touch, it may have undergone some change which requires its removal, and operation may be indicated. This does not apply to the normal sized or slightly enlarged ovary, since discomfort on manipulation of the normal gonad is to be expected. Recurrent acute episodes of inflammation in chronically infected enlarged adnexa, or pain from the adherent and abnormal tubes may incapacitate the patient with each menstrual period and warrant operation. Surgical procedures may be necessary to control the pain of endometriosis which has not responded to more conservative measures. Whatever the lesion, however, if one does not establish an accurate relationship between the symptom and the palpable abnormality before proceeding with operation, the end results will be disappointing.

Infertility: Few operations are indicated for restoration of fertility, and before any such procedure is considered in the female partner of an infertile couple, studies on both husband and wife must be completed. In many instances, more than one cause for infertility can be detected in a single couple. Little can be expected from restoration of patency of closed tubes if the husband produces no spermatozoa. Medical therapy is more often effective than is surgical therapy, although thorough curettage or tubal plastic operations may occasionally prove successful.

Cervical Lesions: Malignant lesions of the cervix cannot always be diagnosed by inspection alone, and before cervical disease is treated, an accurate diagnosis is necessary, since cautery, conization or amputation of an early carcinoma may serve only to delay diagnosis and proper treatment. Biopsy specimens should first be taken from the four quadrants of any cervical lesion which bleeds

to touch, which appears ulcerated or proliferative, or in women over the age of 35.

Conization and amputation of the cervix should be reserved for women who are just past the childbearing age and in whom the lesion is so extensive that its eradication by simple cautery is impractical. Office cautery, often in multiple stages, of smaller lesions and of those in younger women usually is sufficient.

SUMMARY

Surgical procedures should constitute a minor portion of a gynecologic practice because most gynecologic conditions can be cured without operation and in many surgical therapy is contraindicated. The presence of fibromyomata, minor ovarian enlargements or pelvic relaxation is not always indicative of the need for surgical therapy unless the lesion is proved to be causing symptoms or is found on repeated examinations to be growing. Abdominal pain in general and, particularly, chronic vague generalized discomfort ordinarily do not originate from pelvic disease and therefore do not respond to operations on the pelvic organs. Unless a clear-cut indication for surgical intervention is present, a careful history, thorough examination and carefully planned medical therapy will increase the percentage of favorable responses to operation.

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NEBRASKA M.D.'S FIGHT HIGHWAY DEATH TOLL

A short course in preventive medicine by two Omaha physicians has grown into a Nebraska-wide public service. The doctors are Ralph C. Moore, M.D., and Charles Marsh, M.D., a radiologist and a general practitioner, respectively. Their "short course" is a lecture coupled with graphic illustrations on auto safety, and they also tell their listeners pertinent do's and don't's as regards the emergency handling of highway wreck victims. So far, they have talked to about 30 youth organizations, first-aid groups, police corps, highway patrols, and firemen's organizations.

"We pull no punches in our lectures," they say. "We show most emphatically the more horrifying aspects of automobile accidents, the better to convince our listeners of the critical need for caution behind the wheel." Their purpose is to illustrate the terrific effects of high speed and sudden deceleration on the human body.

Management of Traumatic Lesions of the Thorax

HOWARD K. GRAY, M.D.*

ROCHESTER, MINNESOTA

THE MOST COMMON situation in which the orthopedist and the general surgeon have correlative responsibility is one in which traumatic lesions of the thorax have occurred. In this joint endeavor, we are concerned primarily with two questions: (1) what conditions must we be prepared to treat and (2) how do we treat them?

CONDITIONS TO BE TREATED

Shock.—From the therapeutic viewpoint it is well to consider shock as occurring in two phases. The first is the primary shock which immediately follows injury and has a nervous component in which the pain and the psychic factors produce the syndrome by their action on the vascular system. The second phase is the secondary or surgical shock which may rapidly follow the primary shock or be delayed from two to four hours after severe tissue injury.

Secondary shock is characterized clinically by a profound fall in blood pressure, pallor and "clamminess" of the skin, sweating, rapid and shallow respiration, a weak and rapid pulse, and other less obvious manifestations of circulatory collapse. It has been attributed to a variety of conditions, which include acapnia, fat embolism of the higher centers, a toxic substance or substances released from the site of trauma, and the loss of either blood or plasma, or both, from the circulating volume of blood. For practical purposes, only the last theory has been supported completely by experimental investigation, so that, fundamentally, secondary shock now is accepted widely as being caused by an inadequate volume of circulating blood, irrespective of the cause of this decreased volume, be it from actual loss of whole blood or plasma, or be it an indirect result of one or a combination of many other factors.

Hemorrhage.—It has been estimated that when more than 30 per cent of the volume of blood is lost rapidly and is not replaced immediately by transfusion, death usually occurs. In a man weighing 154 pounds (69.9 kg.) the volume of blood would normally measure about 6,300 cc. Therefore, when the estimated rapid loss of 1,500 cc. has been reached without replacement, an extremely hazardous situation has been created in which continued loss of an additional 300 to 500 cc. will probably produce death.

The protective mechanisms which automatically

come into action after hemorrhage are a fall in arterial blood pressure, clotting, increase in heart rate, increase in the respiratory rate, arteriolar constriction and redistribution of blood. The last-mentioned mechanism produces the pallor and coldness of the skin seen clinically as a result of the attempt on the part of the defensive mechanism to divert the available blood from the surface of the body to the more vulnerable and vital regions.

It should be remembered that in a patient in whom persistent hemorrhage is suspected, blood-pressure determinations alone may be seriously misleading because of the desperate attempt on the part of the defensive mechanism to compensate for the loss of volume by imposing a greater load on the heart in its effort to maintain an adequate systolic blood pressure. Frequently this situation is encountered when the systolic blood pressure has been recorded as within normal limits for several hours after injury and little attention has been paid to the accompanying gradual rise in pulse rate and weakening of the pulse in quality. Inexperienced house officers in many instances have had to learn this fundamental fact "the hard way" when the patient finally reaches a point at which the heart no longer can carry this added load and deterioration occurs so rapidly that all resuscitative measures prove to be ineffectual.

Infection.—For practical purposes, all wounds of the chest must be considered to be potentially infected. Penetrating wounds usually are contaminated by the introduction of foreign material, such as metallic fragments, clothing, skin or dirt. Crush injuries without penetration may result in infection of the pleural space by traumatic communication with the lung, bronchi, or esophagus, and the subsequent release of the pathogens usually found in these structures.

Alterations in Respiratory Physiology.—Only in this respect is there any fundamental difference between the treatment of trauma of the thorax and the treatment of trauma in other regions of the body. A general knowledge of respiratory physiology is essential if adequate therapeutic procedures are to result beneficially.

1. **Pneumothorax.**—In the normal individual, negative pressure exists in the potential space between the visceral and parietal pleurae. This so-called negative pressure has reference to the at-

* Division of Surgery, Mayo Clinic.

mospheric pressure and varies with inspiration and expiration, the average variation between respiratory excursions being 4.5 mm. of mercury. In order that pleural surfaces may remain in apposition, which is the condition seen in normal persons, the lung must remain expanded. Negative intrapleural pressure is of importance, therefore, because it maintains expansion of the lung and promotes the return of venous blood to the heart. (An excellent demonstration of the effectiveness of negative intrathoracic pressure relating to venous return may be seen in the course of a radical amputation of the breast. When the axillary vein is exposed, collapse of this vessel occurs on inspiration and refilling takes place on expiration.) When either pleural surface is punctured, atmospheric air is permitted to enter the pleural space and pneumothorax is said to exist. If there is no communication to the atmosphere except through the bronchial tree, there is what is called "closed pneumothorax." If an atmospheric communication exists through the chest wall, there is "open pneumothorax."

Following the development of closed pneumothorax, several complicating phenomena may be observed. By forced expiratory effort against a closed or partially closed glottis, as in the act of coughing or sneezing, air is forced through the aperture in the bronchus or one of the smaller bronchioles which communicates with the pleural space, and tension develops which may be many times atmospheric pressure. Under these circumstances, the lung on the affected side is sometimes almost completely contracted and compressed, and the mediastinal structures are forced toward the unaffected side, with partial compression of the lung on that side. The diaphragm is also displaced downward, and acute dilatation of the stomach may occur.

Following open pneumothorax, two serious complications occur: (1) the loss of negative intrapleural pressure permits the lung to contract, and (2) there is a varying degree of obstruction to the return of venous blood to the heart. If the opening of the chest wall is smaller than the opening of the glottis, the intrabronchial air will continue to aerate the lung in its partially contracted state, and respiratory impairment will be minimal. Only partial contraction usually occurs on the affected side, because insufficient time elapses for outside air to enter the pleural space through the small aperture in the chest wall before expiration forces it out. Tension pneumothorax will not develop under these circumstances because, except momentarily during forced expiration, the tension within the pleural space cannot rise above atmospheric pressure. The pumping action observed in closed pneumothorax is absent, for there is no communication with the intrapulmonary air passages in open pneumothorax. Consequently, the only source of air is through the chest wall, and pressure against a closed glottis

does not add any more air to the pleural space than that which enters under ordinary atmospheric pressure. Almost complete contraction of the lung on the affected side may occur, however, owing to the obliteration of the negative pressure within the pleural space. Minimal "swing" of the mediastinal structures occurs under these circumstances, but is not of such severe consequence as when the opening in the chest wall is large.

If the aperture in the chest wall is greater than the opening of the glottis, the lung is contracted to a greater degree than when the traumatic aperture in the chest wall is small in diameter. On inspiration, the structures contained in the mediastinum are displaced toward the normally ventilating lung by the inrushing air, which is under atmospheric pressure and which enters the pleural space through the large aperture in an attempt to compensate for the increase of intrathoracic volume that occurs on inspiration. In this way, the degree of expansion of the unaffected lung is diminished, and its functioning volume is reduced. This amounts practically to paradoxical respiration, but in this instance it is the mediastinum that is unstable. On expiration, the reverse obtains and the mediastinum is drawn back toward the midline. This "flutter" or "swing" of the mediastinum greatly interferes with the return of venous blood to the heart by moderate angulation of the great vessels, especially the superior and inferior venae cavae. Because one of the major factors in the volume of cardiac output is the volume of cardiac intake or venous return, diminution of venous return is an extremely important step toward the failure of the circulation of an adequate quantity of blood. The chain of events resulting from a large open pneumothorax, therefore, may be fatal if these abnormal physiologic processes are not corrected rapidly.

In addition to these unique physiologic reactions which apply to thoracic injuries, one must not lose sight of the fact that the usual factors involved in the production of shock are operative also, for trauma of such magnitude as to produce pneumothorax may be sufficient in itself to produce shock. A patient usually can tolerate a large open pneumothorax if the functional efficiency of the contralateral lung is not impaired by empyema or inflammatory disease, if the circulatory system is free of a disease process so that it can withstand the increased burden imposed by the physiologic loss of one lung, and if the mediastinum is "fixed" so that the to-and-fro motion does not occur.

2. "Stove-in" Chest.—In the crushed chest, a number of ribs may be fractured, usually in many places. A separation or dislocation of the costochondral or sternochondral articulations is frequently associated with the fractures. Such injuries destroy the rigidity of the chest wall which is vital to the maintenance of a satisfactory respiratory exchange and produce what has been termed "paradoxical respiration." Normal inspira-

tion depends on an increase of intrathoracic volume produced by elevation of the anterior portion of the ribs and the descent of the diaphragm. With the production of increased volume, air enters the lungs under atmospheric pressure and is extruded when the intrathoracic volume is reduced. If a portion of the chest wall has become detached from its bony structure, the involved area becomes indrawn on inspiration and protrudes on expiration—a phenomenon which is just the reverse of that seen in normal respiration and which may produce little or no change in intrathoracic volume, so that air will not enter the respiratory passages on inspiration nor will it be extruded on expiration. Such a condition is incompatible with life and must be corrected immediately.

3. Hemothorax.—The presence of varying amounts of blood in the pleural space is the rule and not the exception when thoracic injury has occurred. The source is as varied as the number of vessels contained in the thoracic wall or within the thoracic cage. Gross and progressive hemorrhage indicates injury to the intercostal vessels, the internal mammary, or one of the larger vessels contained in the cardiorespiratory system, whereas the clinical evidence of hemothorax which shows no sign of progress or shows very slow increase in volume suggests that smaller vessels have been damaged and that the hemorrhage has been controlled spontaneously. Frequently, a concomitant combination of blood, air and serous exudate is poured out as a result of direct trauma to serous surfaces and irritation by foreign material in the pleural space.

TREATMENT OF THORACIC INJURIES

Shock.—The treatment of traumatic shock when injury to the thorax has occurred is not different in principle from therapeutic measures that are to be applied when trauma has occurred elsewhere in the body. Relief of pain, early recognition and correction of the condition that is causing loss of fluid, immediate replacement of the lost fluid, and protection of the patient from cold, anxiety and apprehension are obvious therapeutic measures. In patients with thoracic injuries, restoration of normal cardiorespiratory physiologic processes will, in itself, greatly augment the abolition of shock.

Hemorrhage.—It must be realized that there are several major differences that influence therapy. In shock caused primarily by hemorrhage, whether apparent or hidden, control of the bleeding and immediate restoration of blood by transfusion will usually correct the abnormal state, elevate the blood pressure and maintain the improvement. In shock caused primarily by trauma, when actual loss of blood in appreciable quantities has not occurred, the beneficial effects of transfusion of whole blood are usually of short duration, and the blood pressure may fall to shock levels at the

cessation of what should be adequate replacement. These phenomena are probably caused by the hemodilution that occurs in massive hemorrhage, in contrast to the hemoconcentration which is seen frequently in primary traumatic shock.

The management of hemothorax, pneumothorax or the two combined is the most common problem confronting the admitting surgeon. A hemothorax must not be regarded as a simple hematoma, but as a foreign body in a most vital space. The pleural cavity responds to this irritation by "weeping" serous fluid, thus increasing the pleural mass.

The accepted treatment is removal of the fluid and air. As much as 1,000 cc. of the pleural contents, if easily obtained, usually can be removed safely at one time. When the patient complains of a "tightness in the chest," a good stopping point has been reached. An orderly plan of regular aspirations should be followed, beginning within the first 24 hours after injury. These should be continued daily until the pleural space is dry and the lung is completely re-expanded.

There is no evidence that early aspiration prolongs or brings about a recurrence of hemorrhage, nor is there evidence that replacement with air is helpful. In fact, evidence would condemn the procedure of replacement with air because (1) such a procedure is not necessary to arrest or prevent hemorrhage, (2) it is desirable to evacuate air in order to restore pulmonary function by re-expansion of the lung, and (3) there may be a total empyema if air is present and infection occurs, whereas there may be only a basilar empyema if there is a minimal amount of unexpanded lung.

When a diagnosis of persistent serious hemorrhage has been made, surgical intervention in order to control the bleeding is the only reasonable method of treatment.

Infection.—The principles of therapy designed to avoid or to correct infection in the case of thoracic injury are not essentially different from those designed to avoid or correct infection in the case of trauma elsewhere in the body.

Alterations in Respiratory Physiology.—1. Pneumothorax.—In many instances of the closed type of pneumothorax, simple closed drainage is all that is necessary. This may be accomplished in a variety of ways, but perhaps the simplest method is to insert an intercostal catheter into the pleural space and place the end of the tube connected to the catheter not less than 5 cm. under the surface of water in a bottle that is situated on the floor beside the patient's bed. This provides a valve ("water seal") type of drainage that permits egress of air but prohibits the return of air from the outside. Many mechanical contrivances are available, and these prove to be more effectual by actually producing "suction." When the "pumping" action of forced expiration against a closed or partially closed glottis cannot be controlled by closed drainage, it may be necessary to do a temporary tracheotomy, for in this manner an ade-

quate airway is assured, and the mechanical "pumping" effect is abolished.

The treatment of open pneumothorax is aimed at the immediate correction of the cardiorespiratory imbalance. When the opening in the chest wall is smaller than the opening of the glottis, an airtight dressing over the wound is usually all that is required in the initial or resuscitative phase. When a large open pneumothorax is present, the wound in the chest wall must be closed by a similar dressing or, if this is not feasible, by surgical methods with closed drainage. The negative pressure in the affected hemothorax must be re-established as soon as possible in order to permit re-expansion of the lung and abolish the "flutter" or "swing" of the mediastinal structures.

2. "Stove-in" Chest and Sternal Fractures.—Treatment during the resuscitative phase is aimed at "fixing" the collapsed chest wall in a stable position. If the injury is unilateral, one can best accomplish this by wide adhesive strapping, beginning at the bottom and working up. The patient is directed to lie on the affected side, and sand bags are used to maintain this "fixed" state. If the condition is bilateral, or if there is sternal separation or fracture, the chest wall may be suspended by towel-clip traction applied to the costal cartilages or to sternal screws that elevate and maintain their position. For this purpose, a traction of 2 to 4 pounds may be applied over the pulley on an upright Balkan frame. Numerous ingenious measures for fixation have been described, but most are not applicable at this stage of treatment. In most patients the use of the resuscitative measures outlined herein, plus simple fixation, strapping and sand bagging will suffice. If it is necessary to transport a patient who is being treated by some form of traction, the apparatus may be incorporated in a plaster cast which is applied around the thorax from the level of the suprasternal notch to the lowest portion of the thoracic cage.

General Notes Relating to Treatment.—The extremely restless, apprehensive and dyspneic patient is usually anoxic from loss of blood (either externally or into the pleural space) and from his decreased vital capacity caused by compression of the lung by fluid or air or both and by atelectasis of the lung from blockage of the pulmonary radicles by excessive bronchopulmonary secretions. His efforts to rid himself of these burdens to normal breathing are further hindered by the intense pain that accompanies every voluntary effort. Therefore, his cough is feeble and ineffectual, and the anoxia increases.

Oxygen may be administered through a size 12 to 18 F. nasal catheter which is attached to a portable oxygen tank. The oxygen should flow at the rate of 7 to 8 liters per minute, and it should be moistened, for the constant flow of dry oxygen to the nasopharynx is extremely irritating and may well add to the patient's restiveness.

Catheter aspiration of the trachea must not be neglected, for an adequate airway must be assured at all times.

Regional nerve block relieves much of the pain arising from the site of injury and permits the patient to cough more effectively and to aerate the lung more efficiently than is possible without such block.

To patients with thoracic injury, morphine must be administered cautiously. The recently injured patient who is admitted to a hospital usually has had one or two injections of morphine to ease his pain when first seen and during transportation. This dosage (the exact amount should be determined if possible) coupled with the inadequate circulation associated with shock is apt to show an accumulative effect during resuscitation and may depress the cough and respiratory apparatus, which one is attempting to actuate.

Many surgical procedures for the patient with injuries to the thorax may be performed satisfactorily with local block type of anesthesia. Should general anesthesia be necessary, an adequate airway must be maintained at all times, and it can be accomplished in no other manner than with an intratracheal tube.

NEW POSTGRADUATE-EDUCATION MEDIUM

The California Medical Association, through its recently formed subsidiary, the Audio-Digest Foundation, is promoting a new means of postgraduate education for medical men and women, and it has announced that profits from the project will go to the American Medical Education Foundation. Using tape-recorded material, the Audio-Digest Foundation makes available to doctors three "postgraduate services." The basic service is the weekly issuance of a one-hour tape for general practitioners, on which are recorded from 20 to 30 abstracts of the best in all fields of current medical literature. As a corollary service, Audio-Digest offers semimonthly digests in surgery, internal medicine, and obstetrics and gynecology. The third service is tape-recorded lectures and panel discussions on one-hour reels for individual or group purchase. Many of these last are illustrated by film strips.

Much of the literature digested ordinarily would not come to the busy practitioner's attention. To the physician, the advantages of hearing world-renowned authorities in medicine and surgery in his own living room or in his automobile as he drives from patient to patient are obvious.

A.M.E.F. Secretary Hiram W. Jones estimates that if 20,000 subscribers sign up nationally, the Foundation will profit \$1,000,000 annually.

Physicians interested in the services and wishing more information are invited to write to Mr. Jerry L. Pettis, California Medical Association, 800 North Glendale Avenue, Glendale, California.

Dr. Bierring as an Educator*

MILFORD E. BARNES, M.D., D.P.H.

IOWA CITY

WHEN I WAS ASKED to discuss this subject, I was at a loss as to where to begin. As I pondered, there happened to come to my memory the words of a song in a light opera which I heard while a student. The refrain was:

"Look! Look!! Look in the book!!!

Look in the book and see."

So I looked in the book, and will recount to you some of the things which I saw.

First, I looked in the dictionary and was reminded of the basic meaning of the term "educator." The word is derived from a Latin word which means to *lead* forth, or to *draw* forth. An educator, therefore, is an "educer," i.e., one who leads forth or draws forth.

We are dealing, however, with human minds, and the "educer" must have something within himself by which he is able to lead or draw the mind of another person. He himself must have an inner charge of great potential. And that potential must ever be kept at a high level, or its drawing power will fade away.

My next point of interest was how Dr. Bierring had developed this inner charge. So, I looked in another book, one which contains many salient facts about him.

I found that Dr. Bierring graduated in medicine at the State University of Iowa in 1892. I do not know what teachers stirred him, but he could hardly wait to receive his diploma before he rushed off to Europe. He spent portions of 1892, 1893, and 1894 in Europe, and again parts of 1895, 1896, and 1901. He studied in Vienna, the Pasteur Institute in Paris, the University of Heidelberg, and other places as well. He may have made other trips to Europe, but this record sufficiently illustrates one quality which we have all noticed in him, namely: He has never ceased to study. If we ever cease to study, we are doomed professionally and as "educers."

Now, as to formal service as an educator, the record shows an astonishing spread in his teaching experience. Note first, that he was professor of pathology and bacteriology in the College of Medicine at SUI for ten years (1893 to 1903). Note second, that apparently he desired to have more actual clinical experience, so that during a part of that time (1898 to 1904) he served also as a clinical assistant in the Department of Obstetrics and Gynecology.

Note third, that having learned so much about how babies are born, and through his studies in pathology why people fall ill, and why they die, he next moved into the field of treating the sick. Presumably, he reasoned that he could not possibly make more mistakes in diagnosis than the clinicians of that day were making, and that probably he could make more accurate diagnoses after his experience in pathology. So, from 1903 to 1910 he was the professor of the theory and practice of medicine at SUI. From 1910 to 1913, he served in the same capacity at Drake University.

His 17 years at the College of Medicine at SUI were of an outstanding nature. During those and the subsequent years he has stimulated and aided many of the developments there. In 1946, formal recognition of these outstanding services was made when he was given the rank of Professor Emeritus in our College of Medicine.

Formal connection with institutions of learning, however, is not necessary for a born educator. Such men continue to "educer," whatever may be their vocation. So it has been with Dr. Bierring. From 1913 to 1921 he was president of the Iowa State Board of Health, and from 1933 to 1953 he has been the State Commissioner of Health.

I have often told him that the State Department of Health is the fourth state educational institution. It is obvious that its progress is possible only to the extent that the professional and lay people of this state will support its programs, and that progress, in turn, is dependent upon the effectiveness of its public health educational programs.

With respect to the establishment and maintenance of professional educational standards, I can think of no one in the history of the state who has had a greater share than has he. As a member of the State Board of Health, and later as State Commissioner of Health, he has had a great deal to do with the Board of Medical Examiners and with the similar boards for the nursing, dental and other professions, all of which have influenced profoundly the standards of professional education. In addition to this, for a long period of years he has been national president of Alpha Omega Alpha—an honorary medical society whose membership is selected largely on a scholastic basis. By stimulating the organization of a large number of chapters in the medical schools of the nation, he has exerted a profound influence upon the standards of medical education.

Again, as president of the Iowa State Medical Society and as president of the American Medical Association, he has exerted influence on a state-

* Talk given by Dr. Barnes at a dinner on June 22, 1953, at Des Moines, held by the Iowa State Board of Health, honoring Dr. Walter L. Bierring on his retirement as Commissioner of Health, State of Iowa. Dr. Barnes is a member of the State Board of Health.

wide and also on a nation-wide basis—always in the direction of better and better professional training. Another of his national ventures was the founding of the Specialty Board in Preventive Medicine and Public Health, of which he was an original sponsor and of which he has served as president.

As we scan this remarkable career we may be reminded of the words Goldsmith used in describing the parson in the *Deserted Village*:

And still they gazed,
And still the wonder grew

That one small head
Could carry all he knew!!!

It is appropriate at this time to point out that, busy as he has been with all of these important activities, he has never overlooked the people at his side. All of the professional employees who have been in his service have been stimulated to take advanced studies. Thus, whether they found their permanent work in this or other states, all have profited immeasurably from their association with him and from the encouragement and stimulation this truly great man gave them.

In conclusion, there is one characteristic of the "educer" which has always been a source of won-

der to those of us who have had the privilege of knowing him well. He never seems to look backward. I never have heard him even hint that the *old* days were the *good* days. On the contrary, he always looks forward, as young people do, to the land which lies ahead.

I asked him some years ago how he managed to stay so young. He just laughed, and said nothing. The Bible tells us of a glorious day when, as it says,

"Your old men shall dream dreams,
And your young men shall see visions."

But Dr. Bierring will not have it so. He has always insisted on seeing the visions and has been content to let others dream the dreams. In fact, he is a really young man. He seems to have reversed the line of Browning to read:

"Grow young along with me
The best is yet to be."

And so, *young man*, we salute you and wish for you many more years of leading and drawing the minds of others, helping them to see the visions which you see, and 20 years from now, when you can really qualify as an *old* man, perhaps then you can let them know of the dreams that you dream.

Rooming-In

H. LLOYD MILLER, M.D.

CEDAR RAPIDS

ROOMING-IN IS A term applied to that form of hospitalization where the mother and the new born baby are cared for in the same room.

The term is not *lying-in* or *living-in* as we sometimes hear it called. I don't know why people become confused over the term unless it is that *rooming-in* is a new designation—only eight years old—for the return of an old custom. The question of whether the practice of rooming in is new or old is frequently discussed. Proponents and skeptics alike point out that it is nothing new, although admittedly it must be regarded as a new departure in the modern maternity-hospital setting.

The definition should go farther than denoting the physical facility of mother and baby being together. It signifies an attitude in maternal and infant care and a general plan of supportive parental education which is based on the recognition and understanding of the needs of each infant, mother, and family.

In the last 50 years, obstetrical practice in the United States has moved from the home to the hospital. This shift has occurred for the safety of

the mother and infant and for the convenience of the physicians. The central nursery developed between the beginning of the century and the end of the first world war. It is a uniquely American practice, presumably designed for efficient handling of infants by assembly-line methods. However, in the last few years there has been an increasing recognition of the fact that this accomplishment has not been an unmixed blessing, for it has resulted in an unnatural separation of the family at a momentous time for building unity, and in an increased danger of infection for the infant.²

The trend toward hospitalization for maternal care has done a great deal of good, but also some evil. In recent years the professionals have been so engrossed in the perfection of their technical tasks that human dignity, desires and relationships have been overlooked.

Undoubtedly, routines and many accepted practices have arisen in the cause of efficiency. Efficiency is a prime concern of an institution and of the busy doctor and nurse. But this is the question

that has to be answered: *Is anything efficient which does not take into consideration the desires of the expectant family and of this whole group?* When these desires are satisfied and consideration of these basic relationships is added to the concept of efficiency, then harmony results.

It is possible to devise hospital procedures to meet these desires and to provide physical safety at the same time. If they are to work, they must be developed in staff meetings or discussions in which interns, residents, nurses, aides, and attending physicians participate. Without a thoroughly cooperative attitude on the part of all these professionals, such an intimate relationship as rooming-in could easily fail. Therefore, more important than the simple physical arrangements are the reorientation and indoctrination of personnel working in the new program.

The rooming-in plan in its various forms in this country has been the important outgrowth of many interdisciplinary discussion groups such as the Cornealian Corner, in Detroit, the J. C. Macy, Jr. Foundation and the Commonwealth Fund meeting. There has been country-wide representation in these groups, and they have reviewed methods of infant care and ways for improving them.

Since 1946, the idea of rooming-in has really taken root, and many hospitals throughout the country are using it on either a voluntary or a mandatory basis.^{1, 3} Grace Memorial Hospital, at Yale, was one of the pathfinders and has one of the largest programs. Its workers have contributed much to the current literature since the beginning of the program in 1947.^{4, 5, 6, 7, 8}

The physical requirements for rooming-in need not be costly or luxurious. Most hospitals have the proper equipment. It needs only to be rearranged. In general, all that is needed are facilities for washing hands and wardrobe accommodations for the baby and mother. At New Haven, a bread box was used for the wardrobe. In Philadelphia, the hospital carpenter made a simple wooden wardrobe. At Duke University the wardrobe is a tray covered with sterile towels.

In order to save time and confusion for those wishing to start the program, I will list the specific articles required:

1. An individual crib for the infant. This should have an attached space for diapers, solutions, cotton, etc., for care of the baby and breasts. Also, attached to the crib or near it should be a laundry bag and waste basket. Most modern nursery cribs have the space needed for the above items.

2. Nothing special in design of the hospital is needed—only space for the crib next to the bed. A small nursery or cubicle near the room is ideal for those mothers wishing to be alone at night. In some places, the central nursery is used for the babies during the night.

3. Running water is necessary in the room or near it.

4. A ward carriage which contains the scales, thermometer, antiseptics and cord dressings is convenient for the nurse who is making rounds. However, these things may also be kept in the room.

5. Formula must be accessible to the mother. Thus there must be a refrigerator in or near the room, or a nurse available to bring the formula.

6. An individual bottle-warmer in each room is desirable, but not absolutely necessary. Many mothers warm the bottles in the running hot water in the bathroom, or place the bottle in a pan of warm water obtained from the bathroom.

There are several things that must be done to make the program a success:

First, interns and nurses (graduates as well as students) and any other professionals must be well instructed in the new procedure. These people should be made to realize the psychological effects of remarks made to the new mother. For example, early in our program a mother had a crying baby, and she wished it removed from her room one night. The student nurse answered her request with this remark: "Oh we can't put him back in the nursery. Your baby is contaminated." Of course by the lay person this was inevitably interpreted to mean that the baby was covered with germs. The very anxious mother was calmed down the next day after the term was explained. We now have a smaller isolation nursery where the babies can be kept at night, but this arrangement is not encouraged because of the shortage of nursing help.

Another nurse once said when asked for help—"Well you wanted him with you. Now he is yours to take care of." This attitude of course could absolutely ruin the program if it were not corrected.

Second, the mother should be given written as well as verbal instructions in the care of the baby and of her own nipples. Daily instruction should be given as problems arise for the mother. The mothers who have had prenatal classes have an advantage by having had some instruction before entering the hospital. In our service, the teaching is done by the regular floor nurses, rather than by the nursery nurses. However, the nursery supervisor does help when called about a breast-feeding problem.

Institutions in which the rooming-in plan has been undertaken report advantages for all concerned in the enterprise.^{9, 10, 11, 12} These include advantages to the mother, baby, father and professionals associated with the family unit. They are as follows:

1. All writers on the subject feel that the baby is less in danger of infection under the rooming-in plan than under the central-nursery type of care. It seems logical to me that if an infection should begin in a rooming-in unit, it could be more easily controlled because fewer babies would be subjected to cross infection. At Duke University, the main reason for starting the program was to pre-

vent an epidemic of diarrhea. So far, there have been no epidemics of any kind reported in the rooming-in service and only a very few isolated cases of any type of infection.

2. The babies are happier and more contented. Perhaps it is difficult to determine happiness in an infant only a few days old, but it is well known now that these babies cry much less and that they regain their birth weight faster.

3. The plan promotes unity of the family. The new father is not shoved about like so much excess baggage, but may actually enter into the care of his infant instead of peering at it through a window. The fathers have all been very enthusiastic about our program.

4. The mother develops a much greater confidence in herself in caring for her new baby. I think we have all seen many mothers (especially primipara) who leave the hospital dreadfully afraid of the responsibility of caring for a new baby. Most of them in these days of shortage of domestic help must take over as soon as they get home.

It might be added here that the baby probably develops a confidence in his mother. Certainly a baby can sense a feeling of tenseness in the person who handles him. Therefore, it seems logical to me that when a baby comes home to his stranger mother after being handled so expertly and so relaxedly by the nursery nurse, he is bound to feel insecure. I believe this feeling then may cause fussiness in a baby. This fussiness, in turn, makes the mother more tense, and the problems then increase until they sometimes run out-of-control, and the baby reenters the hospital as a "feeding problem." So it is as important for the baby to become acquainted with his mother as it is for her to become acquainted with him. This is a factor in rooming-in which I believe has been overlooked even by some of its most ardent supporters.

5. Rooming-in is safer for the baby. The mother who has the baby by her bedside can certainly inspect it more frequently than a nursery nurse who may have 30 or 40 babies under her care. Of course the baby should be free of all mucous before being placed with the mother. We keep our babies in the central nursery until they are at least 48 hours old, but this isn't necessary where a nurse is in constant attendance. So far, there have been no accidents reported in the rooming-in units throughout the country.

6. Having the baby near the mother encourages breast feeding. Many more mothers nurse their babies under this method. And, as some one else so aptly has said, "Formulas are good, but after all, cow's milk was meant for calves, and breast milk for babies." In some institutions as many as 90 per cent of the rooming-in mothers nurse their babies.

The sucking reflex and frequent nursings stimulate the flow of breast milk. The baby who is kept in the central nursery and is brought out every

four hours for nursing may be so ravenously hungry that he chews rather than sucks the nipples. Sometimes babies on a four-hour schedule have been crying so long from hunger that they are exhausted and simply wish to sleep when they come to breast. The resultant hardship on the mother as well as on the baby can be prevented by rooming-in and a flexible schedule for nursing.

7. I have noticed that the skin of the baby is usually in better condition on the day of discharge, and that very seldom are sore buttocks seen. I believe this is due to the mother's constant observation and frequent changing of diapers. These mothers are very proud of the care they give their babies.

8. Pediatricians will have fewer telephone calls after the mother goes home. In a survey made at Yale, it was found that the visiting nurse made an average of seven home visits to those parents not having rooming-in, as against three visits to those enjoying the plan.

9. An advantage which I have not seen listed in the literature is worth noting. Most mothers are now allowed early ambulation. Therefore, after the first day or two in the hospital, they have nothing to do and are constantly begging to go home. If they are in a rooming-in unit they are more apt to be busy with the baby and not to feel that their required hospital stay is a waste of time.

We began a voluntary rooming-in plan at St. Luke's Hospital, in Cedar Rapids, November 22, 1952. It was initiated primarily because of the demand of the expectant parents and because of my own prolonged insistence.

Our plan is on a limited scale, and we have been allowed only one double room. Both beds have been occupied most of the time, and at the present time more patients are asking for the arrangement than we can accommodate. Since the double room is more expensive than the four-bed wards, I feel we would have even more requests if one of our three four-bed units could be used. We have had no extra expense as far as equipment is concerned. The cost to the patient is the same as for any double room plus the nursery charge.

There have been about seventy patients in the rooming-in unit since the program was started. All have been enthusiastic. The R.N. supervisor feels that three of the patients were not entirely satisfied, despite the fact that their comments were favorable. There have been no infections of any nature in the babies.

A questionnaire has been given to each mother asking her: (1) to comment on her experience, (2) to say whether or not she would prefer this arrangement in her next confinement, and (3) to offer suggestions for the improvement of the program. The contagious enthusiasm concerning this radical departure from the central nursery routine is shown in a few sentences taken from the mothers' comments made in writing on the day of de-

parture from the unit. "It makes us seem like a family right away instead of having the father an outsider," states a mother with her second baby.

Many mothers made the remark, "I feel I have learned much about my child's sleeping rhythm and that, more important perhaps, she has become used to me." A mother of three made this comment, "This being my third child, I can see where I would have been a better mother if rooming-in had been available twelve years ago when my first boy was born."

There are those who think the mothers in rooming-in are less apt to get enough rest, but the mothers themselves are not of that opinion. One made this statement, "What little care the baby requires is not any more tiring on the mother than the running around the halls that those not in rooming-in do." Another said: "Even though this is my second child, I do not feel rooming-in has deprived me of much needed rest. I have felt more relaxed and tended to worry less having the baby with me."

Our main criticisms have had to do with such things as the mother's needing to walk too far to the refrigerator for formula, and the smallness of our double room. Nearly all said they would use the plan with their next confinement.

CONCLUSIONS

It has seemed to me that since the start of rooming-in, the attitude of the nurses on the entire floor has improved. They seem to be more warm hearted and willing to help cheerfully when a mother needs assistance. Of course a great deal of praise must go to our supervisor, who started our unit and has been enthusiastic in spite of some opposition. Her enthusiasm and kindly attitude

can be seen reflected in the students who come on the floor.

Psychologic advantages cannot be proved by statistics, but, rather, one has to observe these families in rooming-in to appreciate the psychologic benefits. It is regrettable that most of the patients who have taken advantage of our small unit have been under the care of one obstetrician (the author). It is regrettable for the reason that if more doctors could see the results first hand, they would be equally enthusiastic about the plan.

In some form or other, I believe, rooming-in is here to stay, and we as professional people should feel and should encourage new parents to feel, that a new born child is not a possession to be dominated, trained and broken, but, rather, it is a part of the family constellation to be cherished, guided and loved.¹³

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S.U.I. Obstetrics & Gynecology Conference

On March 5-6, 1954, a Postgraduate Conference in Obstetrics and Gynecology will be conducted in Room E-405, University Hospitals, Iowa City.

The Friday morning program is to include the following papers: "The Significance of Toxemias in Obstetrics," by J. H. Randall, M.D.; "Eye Ground Changes in Toxemias," by P. J. Leinfelder, M.D.; "Hormonal Influence in Toxemias," by J. T. Bradbury, Sc.D.; "Pre-eclampsia," by W. B. Goddard, M.D.; and "Eclampsia," by W. C. Keettel, M.D. On Friday afternoon, Dr. Randall will speak on "Essential Hypertension," Dr. W. M. Kirkendall will discuss "The Use of Hypotensive Agents in Toxemic Patients," Dr. W. C. Keettel will speak on "Perinatal Mortality in Toxemic

Patients," and Dr. Goddard will take up "The Role of Sterilization and Therapeutic Abortion in Toxemic Patients."

On Saturday morning, the program will include: "Value of 17 Ketosteroid Determinations in Gynecologic Patients," by Dr. Bradbury; "Recent Changes in Therapy of Threatened Abortions," by Dr. Goddard; "Dysmenorrhea," by Dr. Keettel; "Early Diagnosis of Carcinoma of the Uterus," by Dr. Randall; and "Thyroid Studies During Pregnancy," by Dr. R. E. Hodges.

Checks for \$10.00, to cover the registration fee, should be drawn to the University and sent in advance to the Director, Postgraduate Medical Studies, Room 259 Medical Laboratories, Iowa City.

The Use of ACTH and Cortisone in Leukemia and Lymphoma*

W. H. GRIFFITH, M.D. AND C. F. GUTCH, M.D.

CLINTON

ALTHOUGH ACTH (adrenocorticotrophic hormone) and cortisone have been widely used in most fields of clinical medicine, there are many situations in which their exact role is still not sharply defined. One of these is the treatment of leukemia and lymphoma. Data are steadily accumulating, however, which indicate that the hormones may be useful in treating some of these disorders.⁷ It is the purpose of this paper to present briefly our experiences with ACTH and cortisone in nine such cases.

Evaluation of any treatment of lymphoma or leukemia is difficult. Because of the variable courses of these diseases, spontaneous remissions may readily be misinterpreted as therapeutic response. The nonspecific action of the hormones in improving appetite, strength, and sense of well-being, and in reducing toxicity, further obscures the clinical picture.

Certain specific hematological effects have been attributed to ACTH and cortisone.¹ These include (1) a pancytosis, believed due to a total stimulation of the bone marrow and manifested by a rapid increase in the number of circulating reticulocytes, platelets, red cells, and granulocytes; (2) a sharp reduction, in some cases, in cells of the lymphocytic series in the peripheral blood and marrow, which, it has been suggested, results from interference with the growth of neoplastic lymphocytic cells or from actual lymphocytolysis; (3) a reduction, usually, in abnormal serum globulin values; and (4) a diminution of abnormal hemagglutinins in many cases with a secondary hemolytic anemia.

Griboff has collected reports of 193 cases of leukemia and allied disorders treated with ACTH and cortisone.² These are summarized in Table I. Results were considered good if there was significant clinical improvement and a corresponding hematologic response. Failures showed no response either clinically or in the blood picture. There were, obviously, many degrees of intermediate response.

From these data, and from the work of Stickney,³ Spies,^{4, 5} Pearson⁶ and others, certain generalizations may be made. (1) In acute leukemia, particularly the lymphoblastic type, some im-

provement from hormone therapy may be anticipated in most patients. A few may have dramatic change. The period of respite is short—a few days to a few weeks. (2) In most patients with chronic lymphatic leukemia, fair response may be had for somewhat longer periods. (3) In Hodgkin's disease, and lymphosarcoma, most patients are improved, some in a dramatic manner. There may also be improved response to other forms of therapy to which the patient had become resistant. (4) Chief effects in multiple myeloma are improved appetite and reduced toxicity. Bone pain has been reported unaltered. (5) In chronic granulocytic leukemia, there is apparently little indica-

TABLE I.

Disease	Number of Cases	Per cent Good	Per cent Fair to Poor	Per cent Failure
Acute leukemia, unspecified	56	34	66	0
Acute lymphatic leukemia	38—	71	29	0
Acute granulocytic leukemia	14	35	30	35
Acute monocytic leukemia	14	7	0	93
Chronic lymphatic leukemia	21	0	100	0
Chronic granulocytic leukemia	6	0	17	83
Hodgkin's Disease	13	70	30	0
Lymphosarcoma	20	60	40	0
Multiple Myeloma	8	38	49	13
Mycosis Fungoides	3	33	67	0

tion for use of the hormones. Cases have been reported in which they appeared to precipitate an exacerbation.¹

In patients treated at the VA Hospital in Lincoln, as will be seen from the case reports below, some of these effects or combinations of them were demonstrated.

CASE REPORTS

Case No. 42-437 White male, age 25 years. Chronic monocytic leukemia. Treated by transfusions. Cortisone for five days in terminal phase. Death in fifteen months from onset.

He had weight loss, anorexia, and nausea and vomiting in October, 1949, while in service. Diagnosis of monocytic leukemia was based on blood smear and bone marrow. He improved after multiple transfusions and was discharged from the service.

He was admitted to Veterans Administration Hospital, Lincoln, Nebraska, November 24, 1950,

* The research represented by this paper was done while the authors were members of the staff of the Department of Internal Medicine, U.S. Veterans Administration Hospital, Lincoln, Nebraska. Statements and conclusions do not necessarily reflect the opinion or policy of the Veterans Administration.

with marked enlargement of liver and spleen, slight enlargement of peripheral nodes and bone tenderness. Leukocyte count was 32,800, with 40 per cent typical, mature-type monocytes and 6 per cent "blast" cells. He was given numerous transfusions, but developed numerous superficial abscesses and had numerous bouts of fever and toxicity.

White cell count on 1-2-51 was 56,800, with 90 per cent monocytes. Cortisone 300 mgm. per day was given on 1-1-51 and 200 mgm. per day until 1-6-51. There was reduction in the fever and general toxicity for about 48 hours after cortisone was started, but thereafter he declined rapidly, expiring 1-8-51.

Permission for necropsy was not obtained.

Case No. 43-865 White male, age 33 years. Acute granulocytic leukemia. Treated with ACTH for four days. Death in two months from onset.

About the first of April, 1951, he developed malaise and a little fever. On 5-15-51, tonsillectomy was done. Postoperatively, bleeding was difficult to control, he became febrile, the tonsillectomy site did not heal, and a palpable spleen was discovered.

He was admitted to Veterans Administration Hospital, Lincoln, Nebraska, on 5-25-51, with a temperature of 104.6°F.; liver and spleen were markedly enlarged and tender. There was no peripheral lymphadenopathy. Hemoglobin was 5.9 grams. White blood count was 65,000, with 3 per cent polys, the remainder very immature granulocytes with a large percentage of "blast" cells. Bone marrow consisted almost entirely of myeloblastic cells.

Transfusions and penicillin were given. Temperature to 104°F. persisted. ACTH, 200 mgm. per day, was started on 5-28-51. Fever was reduced, and he was less toxic. By 5-31-51, fever again increased, the temperature reaching 106.6°F. the following day. He expired 6-2-51.

Necropsy examination showed multiple hemorrhages in skin, pleura, pericardium, peritoneum, spleen, liver and adrenals. Histologically, all tissues showed extreme infiltration by very immature granulocytic cells.

Case No. 45-265 White male, 56 years old. Acute lymphatic leukemia. Treated with cortisone five weeks. Death in three months from onset.

In November, 1951, he had developed a sudden phlebitis in the left leg. Enlarged lymph nodes and a palpable spleen were discovered. White blood count was 129,000, with 50 per cent immature lymphocytic forms. Bone marrow consisted almost entirely of lymphoblasts.

He was started on cortisone, 200 mgm. per day, on 12-6-51. On 12-11-51 the white blood count was 70,000, with many immature and stem cells. By 1-14-52 there were numerous ecchymoses, and one area of skin infiltration. No palpable splenomegaly or peripheral lymphadenopathy. White blood

count was 56,000. Cortisone was stopped on that date.

On 1-19-52 he had intra-ocular, gastro-intestinal and genito-urinary hemorrhages. Cortisone, 300 mgm. per day, and aminopterin were started. He was also given transfusions and antibiotics. He expired on 1-26-52, and at that time the white blood count was 380,000.

Postmortem examination revealed extensive gross hemorrhages into all organs. Histologically there were marked leukemic infiltrates in all tissues. There was extensive proliferation of stem cells, believed to be lymphoblasts, in the bone marrow.

Case No. 45-179 Twenty-two year old white male with acute lymphatic leukemia. Treated with cortisone, nitrogen mustard, ACTH, and aminopterin. Death in five months.

In October, 1951, he had developed malaise and lymphadenopathy. Blood count was considered normal. Cervical lymph node biopsy was reported as reactive hyperplasia. By 11-20-51 the white blood count was 75,000; hemoglobin 7.3 grams. Peripheral smear indicated acute lymphoblastic leukemia. He was given cortisone (exact amount unknown—probably 200 mgm. per day) for four days beginning 11-28-51. He received ten transfusions in the following two weeks. Cortisone was again given from 12-24-51 through 1-2-52. White blood count on 12-31-51 was reported to be 21,000.

He was admitted to Veterans Administration Hospital, Lincoln, Nebraska, on 1-3-52, at which time there was generalized enlargement of the peripheral lymph nodes, but no mediastinal adenopathy. The liver and spleen were enlarged. Hemoglobin 12.5 grams; white blood count 17,500, with many immature cells of the erythroid, granulocytic and lymphocytic series. Bone marrow contained immature and blast cells of all series, with very few mature cells. Lymph-node biopsy suggested lymphoblastic leukemia.

He completed a course of 24 mgm. of methyl Bis on 1-12-52. There was considerable decrease in size of the liver, spleen and lymph nodes. White blood count was 4,800, with 63 per cent mature granulocytes. On 1-22-52 white blood count was 12,000.

By 2-3-52 the lymph nodes had increased to greater than their pre-treatment size. The spleen occupied approximately one-half the abdomen. There were numerous petechial hemorrhages. White blood count on 2-5-52 was 145,000; hemoglobin 11.8 grams.

ACTH, 150 mgm. per day, was started. White blood count on 2-7-52 was 93,000, and aminopterin was started. There was marked clinical improvement. White blood count on 2-12-52 was 3,000; hemoglobin 13.4 grams. The peripheral smear appeared "normal." On 2-14-52 ACTH was reduced to 50 mgm. per day. White blood count on 2-21-52 was 5,450; hemoglobin 13 grams. Spleen had decreased 50-75 per cent in size.

By 3-3-52, the spleen and lymph nodes were again enlarged. White blood count was 19,900. He was given a second course of methyl Bis. White blood count on 3-10-52 was 5,200. Five days later, lymphadenopathy and splenomegaly were increasing, and white blood count was 93,000. On that date (3-15-52) cortisone, 200 mgm. per day, was started. By 3-21-52 the nodes were a little smaller, but the spleen was larger. By 3-27-52 white blood count was 154,000, and splenomegaly had increased greatly. He expired 4-3-52.

At necropsy, the spleen weighed 2500 grams, and the liver 3800 grams. There was marked enlargement of all nodes, and gross and petechial hemorrhages in all organs. There was extensive leukemic infiltration in all tissues histologically. The marrow was almost completely replaced by stem cells—believed to be of the lymphocytic series.

(In spite of his apparently turbulent course, this patient spent comparatively few days in a hospital bed. He was able to attend a dance four days before he expired.)

Case No. 44-712 A 23-year-old white male with subacute lymphocytic leukemia, subleukemic type. Treated with ACTH, nitrogen mustard, and cortisone. Death in seven and one-half months.

In September, 1951, he had malaise and felt weak. On 10-5-51, the peripheral nodes were very slightly enlarged, and there was bone tenderness. Hemoglobin 13.4 grams; white blood count 8,400. Bone marrow showed extensive infiltration by very immature lymphocytic cells. Lymph-node biopsy was inconclusive. Repeated white blood cell counts were all under 8,000, and the routine differential cell counts were not considered abnormal.

Anorexia and malaise were marked. Anemia increased, and several transfusions were necessary. On 11-26-51 he was started on ACTH, 100 mgm. per day. There was marked symptomatic improvement. No more transfusions were needed. White blood count on 12-17-51 was 9,800. A bone marrow on 12-26-51 showed little resemblance to the previous picture; erythropoiesis and granulocytopoiesis were quite active, and only very rare abnormal cells were seen. ACTH was reduced gradually, and was discontinued on 1-10-52.

He did well until 2-13-52 when he again had bone pain and fever. Hemoglobin 14.1 grams; white blood count 11,300. Bone marrow on 3-5-52 again showed extensive infiltration by immature lymphocytic cells. He was given methyl Bis with no response. Spleen and liver became enlarged. Cortisone, 150 mgm. per day was started on 3-10-52 with prompt alleviation of all symptoms. White blood count on 3-14-52 was 2,700; hemoglobin 14.1 grams. Spleen and liver were smaller. Cortisone was stopped on 3-26-52. White blood count on 3-31-52 was 3,350; hemoglobin 8.0 grams.

On 4-14-52 he developed sudden, severe abdominal pain. The liver was markedly enlarged, and

there was slight jaundice, but no lymphadenopathy. White blood count was 2,750 with very few granulocytes, an occasional blast cell, and the remainder normal appearing lymphs. ACTH, 100 mgm. per day, was started that date. Jaundice and anemia increased, and abnormal hemagglutination reactions were encountered. He expired 4-17-52.

At necropsy, both the liver and spleen were markedly enlarged. All organs showed extensive gross and petechial hemorrhages. Abdominal lymph nodes were slightly enlarged. Histologically, there was moderate leukemic infiltration of all tissues, with marked infiltration of the heart, liver, spleen and kidneys.

(This patient was able to be comparatively active after ACTH was started. He returned to the hospital only three days prior to death.)

Case No. 45-203 White male, age 31 years, with an idiopathic anemia for five years, culminating in chronic lymphatic leukemia with leukemia cutis. Treated with transfusions, nitrogen mustard, and ACTH. Death in fifteen months after the diagnosis of leukemia.

At the age of 25 he had developed a macrocytic anemia. Extensive investigation failed to indicate its basis. Free hydrochloric acid was present in gastric contents. Several bone-marrow studies revealed hypoplasia only. Treatment with proteolyzed liver and liver and iron produced no response. Multiple transfusions were necessary from time to time. After two years, his spleen became palpable. Bone marrow examination was unchanged. Splenectomy and lymph node biopsy were done; histological examination yielded no additional information. Anemia persisted, and transfusions were necessary at intervals of four to six weeks. Recurrent bouts of infection occurred.

During an episode of pneumonitis in March, 1951, (at which time he was 30 years old) the leukocyte count was found to be 200,000, with 94 per cent lymphocytes. Bone marrow at that time was considered typical of acute lymphatic leukemia. He also had evidence of myocardial insufficiency, which responded to treatment, as did the pneumonitis.

During the following six months, the leukocyte count varied from 30,000 to 60,000, with 80 to 90 per cent lymphocytes. The usual numbers of transfusions were required. By October, 1951, he had developed psoriaform skin lesions over the lower chest and upper abdomen. Biopsy revealed a lymphocytic type of leukemia cutis. On 1-15-52 he was started on a course of methyl Bis. There was slight improvement in the skin lesions, but no change in the leukocyte count or hemoglobin values. Liver became palpable four inches below the costal margin.

Six weeks later, the skin lesions had increased in size and number. ACTH, 60 mgm. per day, was started on 2-22-52 and after two days was increased to 80 mgm. per day. On 2-27-52 he developed pulmonary edema, peripheral edema, and runs of

supraventricular and ventricular tachycardia. ACTH was stopped, the arrhythmias were controlled with quinidine, and the myocardial failure was combatted with mercurial diuretics. Little—if any—improvement in the skin lesion was detectable.

The subsequent course was steadily down hill. The skin lesions spread. The liver enlarged until it reached the pubes, and the left iliac crest. Tumor masses developed in the nares. Adequate hemoglobin levels were maintained only by frequent transfusion. White cell count continued at 25,000 to 50,000, with about 80 per cent lymphocytes. Nitrogen mustard was repeated on 5-8-52 without significant response. His precarious myocardial status precluded further hormone therapy. He expired 5-22-52.

At autopsy, the liver weighed 7,250 grams. Cardiac hypertrophy was marked. Abdominal and thoracic lymph nodes were enlarged. Histologically, there was diffuse lymphocytic infiltration. There was a nodular leukemic infiltrate through the myocardium of the apex of the left ventricle.

Case No. 44-927 A 60 year old white male with multiple myeloma. Treated with ACTH. Death in six and one-half months.

This man entered the hospital 11-14-51 because of increasing constipation and weight-loss for nine months. Physical examination was not unusual except for emaciation. The hemoglobin level was 8.1 grams, and the white blood count was 11,850. Total serum protein was 10.02 grams per cent, albumin 1.9, and globulin 8.29. Urine was negative for Bence-Jones protein. Bone-marrow study on 11-23-51 showed 14 per cent plasma cells scattered throughout the preparation. Another marrow examination on 11-26-51 revealed clusters of typical myeloma cells. There were no typical bone changes on x-ray examination.

Although several attempts were made, he was unable to tolerate urethane therapy because of gastrointestinal upset. He had no bone pain, but had much abdominal distress with frequent vomiting. Because of his extreme discomfort and persistent anemia in spite of transfusions, he was started on ACTH, 150 mgm. per day, on 3-4-52. There was marked symptomatic improvement. He was able to go home. ACTH was stopped after one week. By 3-28-52 nausea, vomiting, and weakness had recurred; the hemoglobin at that time was 10.6 grams. He was started on Acthar gel, 40 mgm. per day, with immediate symptomatic relief. He developed marked moon-facies and urinary frequency, but no edema, glycosuria, or albuminuria, and no hypertension. ACTH was stopped 4-18-52, so he could again go home. The total protein at that time was 8.4 grams per cent, albumin 3.01, and globulin 5.39.

He returned in three days, with signs of cardiac failure. There was cardiac enlargement and pulmonary congestion, but no peripheral edema.

The liver was not palpable, although the spleen

could be felt. The hemoglobin was 9.9 grams, NPN 120 mgm. per cent, and creatinine—4.4 mgm. per cent. The creatinine rose to 10 mgm. per cent, and he expired on 5-1-52.

At postmortem, the heart, lungs and liver were not grossly enlarged. Spleen weighed 240 grams and was quite firm. Histological examination showed clumps of plasma cells in the spleen and kidneys. The normal bone marrow had been largely replaced by packed plasma cells.

Case No. 45-807 A white male, age 35 years, with Hodgkin's disease. Treated with nitrogen mustard, ACTH and x-ray. Death in nine months from onset of symptoms.

In September, 1951, he had developed fatigue and malaise, which persisted. By January, 1952, he had lost weight, was anorexic, and had a tender sternum. Six weeks later, a persistent daily fever developed. Cervical lymph-node biopsy at that time was indicative of Hodgkin's disease.

On 3-27-52 the leukocyte count was 5,000, with 80 per cent neutrophils, 2 eosinophils and 18 lymphocytes. Red cell count was 3,800,000; hemoglobin 10.6 grams; sedimentation rate 52 mm. per hour. There were palpable lymph nodes in the cervical chains, the largest about two centimeters in diameter. One-centimeter nodes were palpable in the axillary and inguinal area. The liver was barely palpable. Roentgenogram of the chest showed paratracheal and left lower hilar adenopathy.

He was given transfusions, and a course of methyl Bis was started on 3-31-52. For five days thereafter, the temperature was normal, but then it rose to 100°F. daily. A chest x-ray ten days after treatment revealed demonstrable reduction in the size of the mediastinal and hilar nodes. A film taken 12 days later, however, showed them to be approximately their former size.

He was started on ACTH, 75 mgm. per day, on 4-24-52. Within 24 hours, the fever diminished, his appetite improved, and he felt much better. The peripheral lymph nodes did not change, and a chest x-ray eight days later showed no change in the appearance of the mediastinal nodes.

On 4-28-52, ACTH was reduced to 40 mgm. of the gel preparation, with prompt recrudescence of fever to 102°F. When this was increased to 50 mgm. per day, however, he became asymptomatic. Blood values remained within normal limits. Roentgen therapy to the mediastinum was begun on 5-12-52, ACTH being continued. Irradiation was completed 5-21-52, and ACTH was stopped. His temperature promptly went to 104°F. daily. Cortisone, 150 mgm. per day, was started on 5-26-52, with no apparent effect on the fever, toxicity or adenopathy. Also, while on cortisone, he developed jaundice. On 6-2-52 the total serum bilirubin was 7.9 mgm. per cent; red cell count 3,000,000; hemoglobin 9 grams; leukocyte count 5,000. The spleen became palpable. Cortisone was discontinued on 6-3-52 when he developed edema and ascites. Nu-

merous transfusions were given. A course of nitrogen mustard was repeated on 6-6-52, with some decrease in size of peripheral nodes and spleen. However, a daily temperature elevation to 103°F. persisted. By 6-10-52 the jaundice had deepened, and the spleen had become larger. A right lower lobe pneumonitis appeared; tachycardia developed, and the total leukocyte count dropped to 425, with 50 per cent neutrophils and thirty per cent monocytes. He expired on 6-19-52.

At postmortem examination, there was marked enlargement of the nodes in the mediastinum, porta hepatis, and about the celiac axis. The liver and spleen were moderately enlarged. Histologically, the picture was considered that of Hodgkin's sarcoma.

Case No. 47-370 A white male, age 57 years, with reticulum cell sarcoma and mycosis fungoides. Treated with ACTH, nitrogen mustard, and transfusions. Doing well after 24 months.

In May, 1951, this postal clerk developed malaise and fever, for which antibiotics were given. An erythematous skin eruption appeared, and he developed a generalized lymphadenopathy. Cervical lymph-node biopsy indicated reticulum-cell sarcoma.

He was acutely ill on admission to the Veterans Administration Hospital, Lincoln, Nebraska, on 6-19-51. Temperature 103°F. There was a generalized erythematous skin eruption, with much exfoliation, scaling, crusting and oozing. The mucous membranes were clear. Firm, discrete two-to-three-centimeter nodes were palpable in the axillae. There were similar, though smaller, cervical epitrochlear and inguinal nodes. The liver and spleen were not enlarged. Leukocyte count was 5,100, with 60 per cent neutrophils, 32 per cent lymphocytes and 1 per cent monocytes. Hemoglobin 11.8 grams. Red blood count 3,850,000. Blood chemistry studies were within normal limits.

On 6-21-51 ACTH, 160 mgm. per day, was started. Temperature became normal that day. The skin lesions improved considerably, but did not disappear. He became markedly edematous while receiving ACTH. The edema was controlled by sodium restriction and diuretics. The ACTH was gradually reduced and was discontinued on 7-10-53. By that date, his entire body had become deeply and darkly pigmented. He continued afebrile.

Biopsy of an axillary node and of a skin lesion was carried out on 7-5-51. Histologically, the node was typical of malignant lymphoma of the reticulum cell type. The skin showed marked lymphoblastomatous infiltration, compatible with mycosis fungoides. In addition, there was a marked increase in the amount of melanin present.

The hemoglobin remained at low levels, and he was given several transfusions. On 7-18-51, a course of 28 mgm. nitrogen mustard was begun. His temperature jumped to 102° to 104°F. daily

during this therapy, and he was moderately febrile at intervals for the following two weeks.

Approximately one month after the nitrogen-mustard therapy, his skin was almost entirely clear, except for the deep pigmentation. The lymphadenopathy was greatly reduced; and he felt generally much stronger. At the time of discharge, on 10-28-51, he had gained 28 pounds. His white blood count was 5,200, his hemoglobin 13 grams, and his red blood count 4,000,000. Peripheral nodes were palpable, but much smaller than originally.

He returned to work, and was subsequently re-examined at three-month intervals. On 2-20-53, the skin pigmentation was barely noticeable. There was not considered to be any significant lymphadenopathy. The hemogram values were essentially normal.

RESULTS

One patient with acute granulocytic leukemia was given ACTH. There was transient reduction in fever and general toxicity during the first 72 hours. Symptoms then exacerbated, and he died on the fifth day of treatment.

One patient with monocytic leukemia in a terminal state was given cortisone for five days. There was a transient reduction in fever and toxicity for 48 hours, followed by an exacerbation of symptoms. Death occurred on the seventh day after treatment was started.

Three patients with acute lymphocytic leukemia were treated with cortisone, ACTH, aminopterin, transfusions and nitrogen mustard in various combinations. Periods of clinical improvement varied from four to ten weeks. Reduction of enlarged lymph nodes, spleen and liver took place in all three patients. There was reduction in total white cell counts, and improved hemoglobin values for variable periods in all cases. The need for transfusions was diminished. While receiving ACTH, one patient showed marked alteration of the bone-marrow picture towards normal. Two patients had symptomatic and objective improvement from cortisone after they had previously had ACTH, but then exacerbation occurred. One of these was improved for two weeks, the other for five weeks. All these patients expired in a fulminating exacerbation while receiving cortisone or ACTH. One displayed abnormal hemagglutinin reactions during this period, while on ACTH.

One patient with leukemia cutis due to chronic lymphatic leukemia was unable to tolerate 80 mgm. of ACTH per day and developed cardiac failure. There was no significant improvement in his skin lesions.

A patient with mycosis fungoides, apparently due to reticulum cell sarcoma, received ACTH in doses up to 160 mgm. per day. The skin lesions improved, but did not disappear. Anemia did not improve. He developed marked salt and water retention, even on reduced doses of the hormone.

Intense melanin deposits in the skin appeared while he was receiving ACTH. He had a subsequent excellent response to nitrogen-mustard therapy.

On two occasions, a 60 year old man with multiple myeloma was completely relieved of incapacitating abdominal discomfort and nausea by ACTH. His need for transfusions was reduced, there was reduction of his serum globulin from 8.29 grams per cent to 5.3 grams per cent, and his albumin increased from 1.9 to 3.01 grams per cent. He expired from renal failure 12 days after the second course of ACTH was completed.

One patient with Hodgkin's disease was given ACTH. Fever and toxicity were significantly improved. There was no change in peripheral or mediastinal lymph nodes. Exacerbation of fever occurred promptly after ACTH was stopped, in spite of irradiation. There was no response to cortisone, and he developed a hemolytic episode while on that agent. There was no response to a further course of mustard, and he expired.

CONCLUSIONS

ACTH and cortisone are not substitutes for other forms of therapy—transfusions, x-ray, the nitrogen-mustard compounds, urethane, and the folic acid antagonists. The indications for such agents have not changed. In some instances, the steroid compounds may be combined with other therapy to prolong or induce a remission which might not otherwise occur. They enable some patients to be active to a degree that would not otherwise be possible, but the eventual prognosis has not been altered.

Every patient with a proliferative leukocytic disease, whatever the type, is an individual problem. Response to treatment can be determined only by clinical trial, and can be objectively evaluated only in retrospect. These patients have extensive neoplastic infiltrates, and myocardial or renal insufficiency may be precipitated abruptly by amounts of ACTH or cortisone which are not adequate either to affect the underlying disease or to control its symptoms.

SUMMARY

1. The effects of cortisone and ACTH in the treatment of leukemia and lymphoma are reviewed briefly.

2. Case reports of nine patients, all of whom received ACTH or cortisone as part of their treatment, are presented.

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State University of Iowa College of Medicine Clinical Pathologic Conference

January 6, 1954

SUMMARY OF CLINICAL FINDINGS

A 66-YEAR-OLD white female suffered a gasoline-fire burn at 7:30 a.m. on January 9, 1953. Her family physician diagnosed the injury as third degree and estimated the burned area at 95 per cent of the body surface. A quarter-grain of morphine was administered at 10 a.m. and repeated at 1:40 in the afternoon. Five hundred cc. of plasma, 250 cc. of 5 per cent dextrose and saline, and 50 mg. of cortisone were given. After having been wrapped in vaseline gauze and elastic bandages, the patient was transported to the University Hospitals, where she was first seen at 3:15 p.m. At this time she was not responsive to stimulation, and her breathing was obstructed, necessitating introduction of a pharyngeal airway. An immediate cut-down was used to expose the long saphenous vein at the

right ankle, and saline infusion was started. The respirations at this time were 6 per minute, and the pulse was 80-90 per minute. Caffeine, sodium benzoate, and restriction of further opiates were effective in treatment of the respiratory depression. Penicillin, 50,000 units every three hours intramuscularly, was started.

A skin-test dose of tetanus antitoxin was administered, followed in one-half hour by 2,000 units of tetanus antitoxin intramuscularly. At 5 p.m. the CO₂ combining power was 42.6 volumes per cent, the blood chlorides were 116 mg./l., the blood urea nitrogen was 22 mg. per cent, and the creatinine was 2.5 mg. per cent. Additional blood studies showed hemoglobin 15 gm. per 100 ml.; red blood cells, 6 million per cu. mm.; and white blood cells, 20,000 per cu. mm.

At 12 p.m. the respirations were 10 per minute and of good volume. The patient was putting out an adequate amount of urine, with a specific gravity of 1.016. The Fantus test revealed 4.0 gm./l. of chloride in the urine. Urine was collected continuously by catheter, and the volume and specific gravity were recorded each half hour. No additional sodium chloride was given, and the intravenous infusion was kept open with 5 per cent glucose. The total intake was 7,000 ml. for the first 24 hours. This included 1,000 ml. of plasma, 1,000 ml. of blood, 1,200 ml. of saline, and 3,800 ml. of 5 per cent glucose.

The urinary output during this period was 395 ml. The average specific gravity was 1.022. Examination of the patient was difficult because of the extensive dressing. The original dressing was not disturbed. Examination of the pharynx revealed some blistering of the mucosa, but there was no respiratory obstruction. The heart tones were normal and regular. The lungs seemed to be clear as far as could be determined by auscultation through the dressings. The patient responded only to the extent of opening the eyes when talked to.

During the second 24-hour period, the patient received 9,250 ml. of fluid, which included 1,250 ml. of plasma, 1,000 ml. of blood, 800 ml. of saline, 1,500 ml. of 1/6 molar sodium lactate, and 4,700 ml. of 5 per cent glucose in water. The urinary output during this period was 763 ml., with an average specific gravity of 1.018. During this second day, the body temperature became elevated to 102°F. Her pulse reached 120 per minute, and her breathing became more rapid. The hemoglobin, which had been around 15 or 16 gm., reached a maximum level of 18.9 grams per 100 ml., with a red blood count of 6.27 per cu. mm. and a hematocrit level of 65 per cent. The patient was still responding to commands by moving her eyelids and head.

During the third 24-hour period, 2,600 ml. of fluids were administered, including 500 ml. of blood, 500 ml. of plasma, and 1,600 ml. of 5 per cent glucose. The urinary output during this period was 1,406 ml. There was no evidence of pulmonary edema. The patient seemed more restless and began moving her lower extremities. Restlessness decreased after aspiration of the oropharynx. There was slight bleeding from the raw, granulating areas in the mouth and pharynx. The hemoglobin level was 15 gm. per 100 ml., and the red blood cell count was 5.05 per cu. mm.

During the fourth day 1,000 ml. of blood and 1,600 ml. of 5 per cent glucose were administered, and the urinary output was 1,085 ml.

The patient died quietly at 5 p.m. on January 13, 1953, 94 hours after a third degree burn of most of her body surface. The urinary output had been decreasing for two or three hours preceding death.

CLINICAL DISCUSSION

Dr. Edward E. Mason, Surgery: The case today is that of a 66-year-old white female who was ad-

mitted to the hospital about six hours following a burn. She was accompanied by a nurse who gave us the report that the burn covered about 95 per cent of her body surface. Since the burn had been well-dressed and there were other more pressing problems, no attempt was made to re-estimate the burned surface, and the entire treatment was carried out on the basis that this probably was a 95 per cent surface burn. In addition, I would like to stress the facts that this patient was given morphine by hypodermic injection prior to admission to the hospital and that during the first few hours of the patient's care, treatment was directed to combating respiratory depression.

The amount of fluid that was given, you will notice, contained considerably more glucose and less saline than one would think a patient should have. Those who cared for the patient said that their purpose had been to prevent pulmonary edema. There was evidence of burns about the mouth and pharynx, with probable damage to the tracheal-bronchial tree. Likewise, they felt that by means of an occasional Fantus test they could tell from the amount of chloride found in the urine whether or not enough electrolyte solution had been given.

Blood pressure could not be followed because there was no uninvolved extremity where blood pressure could be obtained. Judgment as to adequacy of treatment was based almost entirely upon the rate of urinary output, which was measured and recorded every 30 minutes. One might ask the question, "Why was such energetic treatment given to a patient with a 95 per cent body surface burn?" That carries us into philosophical problems which I don't think should be discussed at this time; but the best care was given, even though we know that anything over a 50 per cent third-degree burn will usually cause death.

Are there any questions about the protocol before we discuss the findings at postmortem?

Dr. Elmer L. DeGowin, Medicine: What's the evidence for depression of the respirations by morphine?

Dr. Mason: Whether it was due to the morphine or not, you might well argue. The referring physician and his assistants were greatly concerned about the respiratory depression when she came in, and I think it was, and is, a good idea to give morphine intravenously to a patient in whom absorption of subcutaneous morphine may be slowed up because of shock or poor circulation. We don't know whether or not this patient was necessarily having a lot of pain. It is reasonable to suppose that she was, but with such a severe burn, she might not have had such pain as would require more than a quarter grain.

Dr. John R. Carter, Pathology: The autopsy findings in this case were rather characteristic of acute thermal burns. The patient had first, second, and third degree burns, and it is estimated that these burns involved approximately 80 to 90 per

cent of the body surface. Admittedly, it was rather difficult to ascertain whether or not they were third degree burns without the aid of a microscope. As the vaseline dressings were removed, much of the skin came with them. The majority of the sections of skin and subcutaneous tissues that we obtained, particularly those from around the face, neck, shoulders, and upper trunk, were of a third degree nature microscopically. There was involvement of the dermis as well as the skin appendages. The face, neck, shoulders, and upper trunk were decidedly more involved than was the rest of the body. Generally over the entire body, the subcutaneous tissue was edematous. Each of the pleural spaces contained 350 cc. of serosanguineous fluid. The lower lobes of both lungs were exceedingly edematous, but the upper lobes were relatively normal. The lower lobes likewise showed multiple infarcts, as well as foci of bronchopneumonia—also common findings in a case of this type. There was no fluid in the abdominal cavity, and only 30 cc. of fluid in the pericardial sac.

Petechial hemorrhages of the serosal surfaces were present. The heart, microscopically, revealed a so-called toxic myocarditis. It was very flabby and pale yellow, and histologically it revealed evidence of early degenerative changes characterized by loss of the striations and intercalated discs, as well as by the presence of focal accumulations of lymphocytes. One of the striking features referable to the respiratory tract was the severe congestion and edema of the tracheal mucosa and the mucosa of the main stem. The changes produced by the inhalation of hot gases were quite comparable to those described so vividly in victims of the Coconut Grove fire of a few years ago.

The stomach revealed 30-40 superficial ulcers—typical Curling's type. They were shallow, and they did not involve the muscularis. Around these ulcerations were foci or halos of congestion, which are rather characteristic of this type of ulcer. Although there were no ulcerations of the large bowel or small bowel, there were what were interpreted to be beginning thromboses of some of the sub-mucosal vessels. The liver showed a very diffuse fatty metamorphosis, but there was no evidence of hemorrhage or necrosis. The kidneys revealed evidence of a very early lower-nephron nephrosis. At the time of autopsy the blood urea nitrogen was 65 mg. per cent, and the creatinine was 2.5 mg. per cent, so that any significant degree of nitrogen retention certainly was not present at that time. In addition, there were multiple recent infarcts, together with thrombi leading in to these infarcts.

The adrenals, as you might suspect, also showed changes. These changes are not pathognomonic of burns. They have been described in other stress type reactions, but they did not show the extreme intracytoplasmic vacuolization of the glomerulosa and fasciculata layers. A Meckel's diverticulum and

calcified trichina larvae were found in the diaphragm.

I might anticipate a question that you may have regarding the cause of the ulcerations and the infarcts. Hemoconcentration is always a factor which results in increased stickiness of the blood. Molton, a few years ago, described increased stickiness of platelets and devised a test which had to do with the passage of blood through glass wool. In burn cases, blood does show increased stickiness, as do the platelets when so tested.

Then, lastly, the sludging of blood (the work of Knisely) has to be considered here too. At any rate, the infarcts in this case occurred predominantly in the kidneys and lungs. As regards what may have caused the ulcers of the rectum and of the stomach, we could find no definite thrombi, but presumably the ulcers may have resulted from the sludging of the blood. That is still a rather moot point.

In summary, the rather characteristic findings of severe burn and complications thereof were found in this particular patient.

SUMMARY OF NECROPSY FINDINGS

There were 1st, 2nd, and 3rd degree burns, predominantly the latter, involving an estimated 85 to 90 per cent of the body surface. There was evidence of minimal to moderate lower-nephron nephrosis, in the form of tubular epithelial necrosis and regeneration. Thrombi were found in many of the small arteries of the lungs, and there were numerous small, recent infarcts of the lungs, spleen, and kidneys. The lower lobes of both lungs were the site of rather extensive bronchopneumonia, congestion, and edema. The tracheal and upper bronchial tissues showed extreme congestion and edema, with evidence of recent mucosal regeneration. There were numerous superficial ulcerations, Curling's type, of the gastric mucosa. Moderate toxic myocarditis and fatty metamorphosis of the liver were present.

Incidental findings included arteriosclerotic kidney disease, Meckel's diverticulum, a solitary congenital cyst of the liver, and calcified trichina larvae in the diaphragm.

Death was due to extensive thermal burns and complications resulting therefrom.

NECROPSY DIAGNOSIS

Thermal burns, 1st, 2nd, and 3rd degree, extensive.

Bronchopneumonia, acute, lower lobes, bilateral. Multiple recent infarcts of lungs, spleen, and kidneys.

Fatty metamorphosis of liver.

Multiple Curling's ulcers, stomach.

Arteriosclerotic kidney disease.

Trichinosis, inactive.

Dr. DeGowin: I'd like to ask if there is any real clinical evidence that the restriction of electrolyte fluid administration can prevent or serve to de-

crease the amount of edema in a patient with burns in the tracheal-bronchial tree?

Dr. Mason: Dr. Carter, would you care to answer that?

Dr. Carter: In this particular case it did not seem, in going over the material both grossly and microscopically, that all of the pulmonary edema that she had in the lower lobes could be explained entirely on the basis of pneumonia, but the question is a very hard one to answer. I do think it is important to bear in mind that the upper lobes of these lungs were perfectly dry. She did not drown in her own fluid, so to speak. The other thing to be remembered, too, is that the tracheo-bronchial tree was badly damaged, as I have mentioned. The capillaries were dilated, and the tissues were exceedingly edematous.

Dr. Mason: I have asked Dr. Ziffren to discuss the case and also to discuss the treatment of burns during the acute or early stage.

Dr. Sidney E. Ziffren, Surgery: As you are well aware, a severe burn probably represents the greatest form of stress reaction that we see in human beings. One of the reasons we know so little about burns is probably that we know so little about stress. But, certainly, we have learned a great deal about burns in the last 15 years. One must remember that the skin is an organ. It isn't something that can be dispensed with. Once a human being has lost the major portion of his skin surface, he has lost one of the major organs of his body. It is extremely necessary to life. You may perhaps have heard of a proposal for taking skin, grinding it up in some type of blender, and spraying it on individuals. That proposal, of course, entirely misses the point. Skin is a very specific type of tissue. Epidermis, dermis, fat tissue, elastic tissue, and collagen—each of them serves its very important function in maintaining the proper environment of the body. Not infrequently you read of a person who has suffered a third degree burn, say of 70 or 80 per cent of the body, and has recovered without grafts. Don't you believe it! When those who report such "miracles" speak about third degree burn, they are not speaking about a *real* third degree burn. A third degree burn is one that involves the entire thickness of the skin, including the skin appendages. Once you have a third degree burn, that area is not just infected; it can never regenerate. There is nothing to regenerate. When you see a photograph of someone who has had a third degree burn and who has recovered following ACTH or some other magic medicine, you know very well that that individual didn't have a third degree burn because he could not regenerate his skin.

The justification for treating an individual who comes in with a severe burn of most of his body surface is that we don't know whether the burn is all third degree. If the patient under discussion had a burn that was all third degree, of course, it would be a very hopeless proposition, but no one

looking at an individual who has been burned can tell at the time of injury whether the damage is first, second, or third degree. Every third-degree burn always has accompanying second and first degree burns surrounding it in different areas, and in many instances burns have been labeled third degree, but, lo and behold, when, after ten or fourteen days, they have been reexamined, they are found to have healed. Of course, in other instances there have been individuals whose burns have been mislabeled second degree. When you see them ten or fourteen days later, you find the entire skin surface a slough. Those burns, in most instances, were third degree from the beginning. So one never knows, and it is incumbent upon one to treat the patient as if he didn't have a body surface burn to the extent of third degree.

We have to handle two problems in this type of case. The first is to care for the tremendous plasma-volume deficit that exists. The second is to replace the extracellular fluid that has drained in tremendous amounts from the uninjured parts of the body. These people have sequestered a tremendous quantity of fluid in this tissue. If you take a normal individual and increase his body-surface area about two millimeters in thickness, which is practically undetectable to the eye, you place approximately three liters of fluid in the skin. You can imagine the tremendous amount of fluid that escapes and is retained in this so-called wound edema of a burn. That is why such patients require so much fluid. In treating an individual with a severe burn, you always have to remember that the first 48 hours are certainly the most important from the standpoint of shock; the complications that occur later represent an entirely different story. In that first 48 hours, the individual can die of one or two complications. He can die of undertreatment, with resulting shock and consequent anuria, or he can die of overtreatment. You may think it is impossible to overtreat a burn. But, mind you, most deaths in recent years have been the result of overtreatment. One must tread a very narrow path. A formula is all right, certainly, if you can do nothing else; but, when you have an individual with a terrific injury, it is, as someone has remarked, a travesty to treat that human being by means of a formula. A formula adds handicaps. For instance, in an individual who has a severe burn, you don't know just how much effect the depth of the burn has upon the amount of wound edema. In addition, one per cent of the body surface in a big man is not one per cent of the body surface in a small woman. A burn over the buttocks and over the scrotum can sequester a tremendous quantity of fluid, in contrast to a burn over the front of the chest wall, which won't hold as much. Thus, the size of the patient and the locale of the burn make a tremendous difference. We do know that a burn patient can be treated very adequately and probably most sensibly by watching his urinary output. If he doesn't

put out any urine, either you haven't treated him adequately enough or early enough, or he has tremendous kidney damage so that he can't put out any urine. Either way, you are in a pretty tough spot, or at least the patient is in a pretty tough spot.

As far as I am concerned, the most accurate method of therapy is to place an indwelling catheter in his bladder and measure his urinary output. If an individual is putting out, say, 25 to 50 cc. of urine every hour, you can feel well assured that he has good kidney output, and he isn't going to fall into shock. First, and primarily, I would always treat one of these individuals with blood. I don't want to get into a long dissertation about the advantages of blood over plasma, but at least for the moment let me say that blood probably has a tremendous advantage over plasma. One starts the blood transfusion and measures the urinary output. After the blood has run in, you should attach a bottle, say of salt solution or a combination of salt solution and sodium lactate (800 cc. of saline, 200 cc. of sodium lactate), and have the fluid running in at 120 drops per minute. If the individual puts out adequate urine but the specific gravity is high, one can assume that he is still dehydrated and requires more fluid to replenish his extracellular space. It continues to run at 120 drops per minute, and his urinary output begins to rise. The urinary output goes to, say, 75 to 100 cc. an hour. Under those circumstances, it is logical to assume that he is getting too much fluid, and the rate must be slowed down. However, if you are administering this fluid at 120 drops per minute and he puts out only 15 cc. of urine, then the natural supposition is that he needs more blood, and immediately one substitutes blood for the fluid that is running in at the time. In that fashion one can cut down the quantity of fluid the patient needs. If the patient can take fluid by mouth, one can use a solution containing a teaspoon of salt and of baking soda in a quart of water. This will supply the electrolyte needed with a minimal risk of creating pulmonary edema.

In this individual's case, the referring physician and his assistants were faced with another problem. When you have an individual who is burned and who is caught in a closed space, he suffers burns of the mouth, the trachea, and the tracheal-bronchial tree; he has the same sort of process going on in his windpipe that he has on the surface of his body. He has a tremendous edema taking place there. He has an exudate which may even form a membrane. Such people not infrequently get hemorrhagic areas in the trachea. They may even slough off pieces of the windpipe, blocking portions of the lung and giving rise to an atelectasis. Under those circumstances, one knows that he is running a great hazard that the patient will die of pulmonary edema. Now in an infant or an elderly individual (certainly one over 60

years of age, and this patient was 66), you have an additional hazard. Infants and old people can't stand being given tremendous quantities of fluid. You have to tread that line very carefully, or you are going to kill that individual by treating him too vigorously.

I might mention one other point. At the end of 48 hours, an individual who is burned ordinarily stops collecting fluid in his interstitial space. The amount of edema that he develops follows a sort of parabolic curve. The rate of accumulation rises very rapidly, but begins to lessen in about 36 hours. At the end of 48 hours, practically every one of these individuals stops accumulating fluid. At that time, one should stop administering the intravenous fluids, except for that which may be necessary to take care of the usual losses of evaporation. The patient has been putting out large quantities of adrenal hormones, principally glucocorticoid hormones—sequestering the sodium. His kidneys are not excreting sodium. He is keeping it all inside his body. The eosinophil count drops precipitously, and then on the third day the eosinophil count begins slowly to rise. The more severe the burn, the slower the rise. He begins to have a diuresis, and he rids himself of this fluid. If you keep pouring fluid into the patient, you are likely to throw him into cardiac failure or pulmonary edema.

Someone asked about the Fantus test. I don't know why they found 4 grams of chloride in the patient's urine. My guess would be that inasmuch as she put out only 395 cc. that day, she may very well have had some of that in her bladder when she came to the hospital. But, if an individual is putting out sodium in the urine, there are several thoughts that come to one's mind. The patient may have been getting the fluid too fast; the kidneys may have been damaged, permitting this material to escape from the kidneys; or perhaps the individual is suffering from adrenal insufficiency and can't retain the sodium. One point here—I see that this patient had a temperature of 102°F. These people can't stand high temperatures of any degree. You can see why—because they have no control. The patient has lost a good portion of her body surface that enabled her to control evaporation. Therefore, you must always be sure they aren't surrounded by heat cradles and steam radiators, and if necessary, take off the bandages. Of course, that is still another question—these bandages. They have a lot of advantages and a lot of disadvantages.

I notice that whereas on the day previously she had a hemoglobin level of 18 grams, on the third day she suddenly had a hemoglobin of 15 grams. We can only assume that she had what is commonly known as a "false anemia." After this previous period of hemoconcentration, there developed a rise of the plasma volume because she was withdrawing the fluid from about the burned sur-

face, and consequently the blood count seemingly fell.

I think that it is very interesting to see just how much fluid this patient received. I added up all the fluids that she received in this four-day period. It added up to 21,700 cc. During this time she had a urinary output of 3649 cc. If we very generously assume that in four days she evaporated 6000 cc., that would give us 9649 cc. Subtracting that from the original 21,700 leaves us with 12,051 cc. of fluid which is somewhere within her body, unless she lost some with her exudate. I haven't the slightest idea how much she lost in this manner, but she retained a considerable amount of fluid.

You see that perhaps she wasn't treated ideally. I am sure that if she had been treated originally with blood, without the plasma, the fluid requirements would have been less. I am also sure that if she had arrived at the hospital in less than eight hours, she probably might have lasted longer, because there is no question that the 395 cc. output in the first day played a role in her death. These are terrible problems, demanding almost constant attention, and the tragedy is that some patients whom you carry through the shock phase die in the ensuing weeks of something else.

Dr. Mason: Are there any other questions?

Staff Member: Did she receive any potassium?

Dr. Mason: There was no potassium given this patient during the time that she was in the hospital. Ordinarily the potassium in the extracellular fluid is increased in a patient that has tissue destruction and damage to cells. I suppose the danger, as far as potassium is concerned, is that she might have too much potassium instead of not enough.

Dr. Henry E. Hamilton, Internal Medicine: She did get potassium in the blood that was administered.

Dr. Mason: To the extent that the blood had aged and the potassium had leaked out of the cells in excess of what is normally in serum and to the extent that the blood hemolyzed before it was given, she received potassium in the blood she was given.

Dr. DeGowin: Isn't it supposed that permeability of the pulmonary capillaries increased? Why then does the restriction of sodium necessarily influence the incidence of pulmonary edema?

Dr. Carter: Yes, that's true. Let me just mention the pathological aspect, and then Dr. Ziffren can answer your question probably a lot better than I can. It is true that not only do the pulmonary capillaries dilate and exhibit increased permeability, but so also may the vessels throughout the entire body dilate in a transient manner. One of the things which I didn't mention which is of interest to us is that not only do the vessels dilate, but the endothelium becomes greatly swollen. This, too, need not necessarily be related to the exact point of trauma, but may be a rather general reaction. This has been observed by a number of

people and may account, in part, for the increased stickiness of the blood.

Dr. Ziffren: Well, I wish I could answer your question, Dr. DeGowin. But you take an aged individual and keep pouring fluid into him (it doesn't even have to be salt solution), and you know that you can overload him. I don't know the mechanism.

Dr. DeGowin: There are other conditions in which you don't even give fluid.

Dr. Ziffren: Absolutely true. I wouldn't argue, but I do know that from a clinical standpoint, you can kill them.

Staff Member: Do you estimate the daily loss and then try to replace the loss of fluid? Or do you try to estimate the millimeters of skin thickness?

Dr. Ziffren: No, we don't try to estimate the millimeters of thickness. We do not try to estimate the daily loss. We try, by measuring the urinary output, to make sure that the patient is not overloaded, and we try to see that he is not undertreated. That's a narrow line to go on, but as I said, these patients are real problems. It's almost impossible to calculate their requirements properly by means of a formula.

Dr. H. Russell Meyers, Neurosurgery: What about the relative merits of the various dressings?

Dr. Ziffren: Well, the only way you can kill a patient with a dressing is by putting it on too tightly around the chest or abdomen. By putting it on tightly around the chest, of course, you may inhibit respiration. By putting it on tightly around the abdomen, you can impede the venous return to the kidney. Now that is how you can kill a patient with a dressing. Ordinarily, one doesn't kill them with a dressing if he pursues a reasonable degree of care and remembers that he cannot lessen the amount of fluid loss by any dressing. The treatment of a patient by means of the so-called exposure method has a lot of merit. However, it has disadvantages. The disadvantages are, of course, simple. If you have a patient who is burned on both sides of the body surface, it is impossible to treat him by means of the exposure method because the idea behind it is to dry the surface in the air. It takes several hours to dry, and if you have him lie on his bed sheets, each time he moves, dried exudate pulls off, again leaving a raw, weeping surface. Still, it has its practical uses in an individual whose burn is limited to one surface of his body or to one extremity which can be elevated. It is very true that people who are treated by the exposure method probably have less conversion of second degree to third degree, and they probably have less exudate. Certainly in the second week of their burn they are not as odorous, and they do not have as much fever. But from a standpoint of handling them, there is no objection to applying a dressing. The dressing, to me, is inconsequential. The life or death of an individual during the first 48 hours doesn't depend upon it.

Any other questions?

Dr. Hamilton: What do you consider a satisfactory urinary output?

Dr. Ziffren: 25 to 50 cc. an hour.

Dr. Hamilton: Of what specific gravity?

Dr. Ziffren: If the specific gravity is high, I would say the patient needs more fluid. If it is low, I would say he is getting too much fluid, and the rate of intravenous flow should be slowed.

Dr. Hamilton: What if it were 1.027?

Dr. Ziffren: Much too high, and you would have to give him more fluids.

Dr. Hamilton: Even if he is eighty years old?

Dr. Ziffren: Yes, even if he is eighty years old.

Dr. Hamilton: How long do you follow the urinary output?

Dr. Ziffren: Two days.

Staff Member: Would the artificial kidney be of any use?

Dr. Ziffren: Well, I am unable to say. First of all, when such a patient comes in with a tremendous burn of this sort or any severe burn, you have to give him a great deal of fluid. Such an apparatus would have to be all ready to operate. I don't know just how much such filtration would increase survival rates. If an individual isn't putting out any urine, there can be either one of two causes: he is in shock, or he has kidney damage. There is only one course that you have available, practically speaking, and that is to speed up the fluids and give more blood. Even after that, if the individual is still not putting out any urine, I would say that there is no hope unless you have some other means to handle kidney filtration. The artificial kidney might be an answer.

Staff Member: What about the amount of lower nephron nephrosis?

Dr. Ziffren: Well, she was putting out urine on the fourth day (1085 cc.), and I see that the day before she had 1400. The specific gravity is not stated. Do you have any comments to make on the lower nephron nephrosis, Dr. Carter?

Dr. Carter: It was a very mild lower nephron nephrosis, and whether it would have gone on to develop into a full-blown case that one can correlate so well with the urinary output and the elevated BUN is hard to say. The degree of damage, which, through real, was very mild, was not commensurate at all with a high BUN or creatinine. No matter what the cause of the lower nephron nephrosis, the clinical and laboratory findings are in general proportional to the severity of damage to the kidney tubular epithelium.

Dr. Ziffren: Any other questions?

Staff Member: This ulceration of the stomach—what are your ideas about that?

Dr. Ziffren: I don't know the cause. Dr. Carter, you had an idea about that. Why don't you tell them about the Curling's ulcers?

Dr. Carter: Well, all I can say is what I said a few minutes ago—that there are a number of theories as to what causes these ulcers any place

in the gastro-intestinal tract. Presumably, the ulcers result from infarction produced by thrombi. Presumably the thrombi are, in turn, the result of a number of factors: one, hemoconcentration; two, increased stickiness of the platelets and the red cells; and three, sludging of blood. The swelling of the endothelium, which is a very real thing, is another factor. There is experimental evidence for all these factors. Certainly, in this particular case we also found thrombi in the obvious infarcts in the lungs and the kidneys. In the Curling's ulcers, we found no thrombi. I mentioned also that in the lower portion of the ascending colon we found vessels distended with poorly formed thrombi, but that no definite ulcerations were visible.

Dr. Mason mentioned that a friend of his at Minnesota had done his thesis work on this particular problem, and that it was his conviction, too, that the best explanation for the ulcerations was the formation of thrombi.

Dr. Mason: We frequently find ulcerations in the stomach and other parts of the gastro-intestinal tract after the administration of cortisone or ACTH or in patients who have been under severe stress. I am reminded of an experience that a friend of mine had in the dog labs when a new dog was brought into the colony and all the other dogs jumped on him. They had a terrific battle, and they almost tore the new dog to pieces. When the animals were finally separated, this dog was allowed to remain in the corner, and after several hours he died. They posted him, and he had ulcerations all up and down his gastro-intestinal tract.

One could say that that was due to a very great stress. I think that there is another theory that we might mention. After completing work on the kidney with Trueta, this same group of workers who described juxtaglomerular shunts in the kidney began studying the circulation in the stomach, and they have described similar arterio-venous shunts in the stomach, which under certain circumstances can shunt the blood away from the mucosa of the stomach. It is conceivable that under extreme conditions of this sort so much blood can be shunted away from the mucosa that you could actually have ischemic necrosis of areas of the stomach mucosa.*

ERRATUM IN

"One Hundred Years of Iowa Medicine"

Page 288 Line 15 from bottom of page

Between the withdrawal of Dean Guthrie from the Headship of the Department of Obstetrics and Gynecology and the appointment of Dr. Frederick H. Falls to that position, there was an interval of 14 years. During this period Dr. William Robert Whiteis was Professor and Head of the Department, a position he held with much credit.

* Barclay, A. E., and Bentley, F. H., The Vascularisation of the Human Stomach: A Preliminary Note on the Shunting Effect of Trauma, *Gastroenterology*, 12:177-83, (Feb.) 1949.

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A NEW LUNG CANCER DETECTION PROGRAM

Under the sponsorship of the American Cancer Society, a lung cancer detection program is being organized which may result in taking x-rays of the chest once or twice a year of every man in the United States who is over 45 years of age.

This program was reviewed in detail by a group of physicians representing several of the medical specialties at a meeting in New York City on January 30, 1954. This group is known as the Joint Liaison Advisory Committee on Lung Cancer of the American Cancer Society. Chest physicians, thoracic surgeons, radiologists, pathologists, the National Tuberculosis Association, and, of course, the American Cancer Society are all represented. Unfortunately, no representative of the American Medical Association was invited to serve on this Committee.

The Board of Directors of the American Cancer Society, acting on the resolutions of the National Lung Cancer Committee, directed at their meeting on November 6, 1953 that a Joint Liaison Advisory Committee on Lung Cancer be established to assist the American Cancer Society in formulating the most effective methods for case finding within its corporate divisions. In calling this meeting for January 30, there was an attempt to secure effective representation from the professional groups that would be involved in such a program and, also, from the voluntary health agency that has had the greatest experience in mass case finding in chest diseases.

Consideration of a lung cancer detection program of this scope is based upon the premises that (1) there is a real increase in cancer of the lung;

(2) early lung cancer is more curable than late lung cancer; and (3) early cancers of the lung can be found in asymptomatic individuals by x-rays of the chest. All three of these points are, to a degree, controversial. They do, however, coincide with the general approach to the cancer problem, namely, early diagnosis with adequate treatment of the cancer.

If there is an increase in the number of cases of lung cancer, and this seems to be generally accepted, then a new approach is necessary. The salvage rate at the present time is negligible. The American Cancer Society program hopes to increase this salvage rate by finding those cases that are still in the asymptomatic stage. This objective is a lofty one. Their program, however, is staggering in its scope, for there are approximately 25 million men in the United States over the age of 45.

This program differs somewhat from the usual mass survey for the detection of tuberculosis. In the past, mass surveys for the detection of tuberculosis have been carried out at infrequent intervals. It is believed that an x-ray taken every few years, with adequate follow-up of friends and relatives, is sufficient for the detection of active cases of tuberculosis. However, thoracic surgeons generally agree that if a lung cancer detection program is to be successful an x-ray must be taken of each man at least once a year, and preferably twice a year.

In order to obtain proper cooperation from the group to be surveyed, especially after the first two or three x-rays, it is the belief of many that the x-rays must be free and that they must not be combined with any general physical examination. This will inevitably result in the taking of x-rays through established health agencies rather than through the offices of the practicing physicians. Thus, a program is being proposed which will probably deviate from the previously established policy of "every doctor's office a cancer detection center."

This problem was reviewed by the House of Delegates of the American Medical Association in 1950, and at that time the following resolution was adopted:

"WHEREAS, The American Medical Association wishes to promote the diagnosis of cancer in its early stages; and

"Whereas, It wishes to support the application of such diagnosis throughout the profession; and

"WHEREAS, It believes that the diagnosis of cancer should be a function of the local private practice of medicine; therefore be it

"Resolved, that the American Medical Association endorses the use of all recognized facilities for the initial diagnosis of malignant disease, including the examination of tissues, exudates and bodily excretions. In the case of mass surveys, the American Medical Association be-

lieves that this work should be in the hands of qualified private practitioners; and be it further "Resolved, that these surveys be conducted at the local level and under the direction of the county or state medical society."

In an effort to comply with the policy of the American Medical Association this proposed lung cancer detection program will be submitted in the near future to each state and county medical society throughout the country. It is very important for physicians to give serious thought to this proposal so that they will be prepared to act upon it when it is presented to them. The magnitude of the program, the probable disregard of the patient's ability to pay, the probable transference to health agencies of a phase of medical care which has traditionally rested in the hands of the private practitioner, the precedent that would be established (of looking for cancer by laboratory means rather than by a complete examination) and the further development of a barrier between the patient and his family doctor are points which should be given careful consideration. In considering these points, physicians must not lose sight of their obligation to the public, however, to provide the best protection available against what is now generally a fatal disease.

When your local chapter of the Cancer Society comes to you with the request that you consider this cancer detection program, be prepared to give them an answer. If your answer is "yes," then be prepared to tell them how such a program should be carried out.

THE 1954 ANNUAL MEETING

The program and special events of the 1954 annual meeting will be found elsewhere in this JOURNAL. A particularly interesting scientific program has been planned by the committee. The morning sessions will be general in character, as is customary, and the afternoons will be devoted to the various specialties. Two section meetings will be held both Monday and Tuesday afternoons at Hotel Savery, in addition to two at the Hotel Fort Des Moines. Special luncheons and dinners have been scheduled, some with scientific papers to follow.

A full roster of technical exhibitors will be present. Their displays will provide a great deal of educational material in their special lines. We hope the physicians will visit them and make them feel their participation is worthwhile, both from their standpoint and ours.

It is with regret that the arrangements committee omitted the scientific exhibit section this year. In 1952 and 1953, this part of the meeting was housed in the Midtown Roller Rink, but this building has now become headquarters for WHO-TV and so is not available to us. It proved impossible to find suitable space for the scientific exhibits for the 1954 meeting. The section has grown greatly

in the past few years and deserves a good meeting place. After consultation with the College of Medicine and other interested exhibitors, it was decided to omit the scientific exhibits this year but to plan to resume them in 1955, when we hope to be in the new Memorial Auditorium.

Present hopes are that the new auditorium will be finished in March, 1955. Delays are almost inevitable in a building of that size, however, and possibly the House of Delegates will be asked to consider holding the annual meeting early in the fall, when use of the new auditorium would be assured. It will be possible to house all of our technical and scientific exhibits under one roof in the new building, and we are told there are to be ample meetings rooms for our different sections.

The House of Delegates will be called to order at two p.m. on Sunday, April 25. All members of the State Society are invited and welcome to attend the sessions. Delegates and officers will be seated at special tables for the transaction of business, but there will be room for any others who wish to attend. The second meeting of the House has been set at seven-thirty Wednesday morning, April 28. Reference committees will have been appointed to study the various reports and resolutions that may be presented, and these will report back to the House at the Wednesday morning meeting, following election of officers.

Of especial interest to our physicians will be the report of the Committee on Osteopathy and the committee dealing with Blue Cross-Blue Shield problems. The meeting of all participating physicians in Blue Shield will be held in the Grand Ball Room at five p.m. Monday afternoon, April 26. We hope most of those at the meeting will be present to consider the state and national problems of Blue Shield.

Handbooks for the House of Delegates will be mailed to all delegates and officers before the end of March. This will allow time for study of the reports by each county medical society.

In accord with the by-laws, a summarized report of both meetings of the House will be carried in the July JOURNAL, and a brief summary will be mailed to all delegates as soon after the meeting itself as possible. Reports of reference committees will be given in toto, so that all members may know precisely what action was taken by the House.

The business and economic sides of the practice of medicine become more complex each year. The average doctor attending the annual meeting finds it difficult to attend all of the scientific meetings he would like to, while at the same time keeping in touch with developments in the House of Delegates. It can truly be said, however, that the annual meeting offers many different challenges and should provide something of worth to every member, according to his own individual taste. Possibly best of all is the opportunity to renew friendships and see colleagues from the different parts of the state. We hope you will plan to attend.

THE PROBLEM OF THE FOREIGN PHYSICIAN

For the past 15 years there has been much discussion of the foreign physician and the part he might play in this country. The problem of whether to license such physicians to practice medicine without restriction has arisen in many states. When restrictions have been imposed, there has been some public criticism of the action due to the fact that people are not aware of all of the implications of licensure.

The recent Congress on Medical Education and Licensure, held in Chicago February 7-9, seems to have shed more light upon the situation than has been available for many years.

It was pointed out there, that even before all of the unapproved medical schools in this country were eliminated, an influx of foreign trained physicians had begun, and that now there are more than 20,000 such residing here. The United States government, in fostering international good will, is admitting large numbers of displaced persons, including physicians about whose professional ability it asks no questions. Recent legislation will permit several hundred thousand more to enter.

Several different speakers drew attention to the inadequacy of the medical training of most of the foreign doctors seeking to practice in the U. S. The last war brought destruction and degeneration to medical education everywhere in Europe except in Great Britain and Scandinavia. Thus large numbers of foreign graduates have completed specialized training without any consideration of the deficiencies in their basic medical training or their eligibility for licensure. This is the equivalent of trying to erect a medical practice upon a foundation of sand.

For the past five years the American Medical Association has endeavored to inspect foreign medical schools and determine whether they provide basic medical training on a par with that of approved schools in this country. So far, some 39 foreign schools have been listed, but since there are more than 550 medical schools in the world, the job is enormous.

As a consequence it has been suggested, and it would seem the suggestion has merit, that some uniform plan for screening the professional competence of foreign-trained doctors be adopted. We now have a National Board of Medical Examiners that examines many graduates of our own medical schools. The value of the National Board lies in the fact that state boards of medical examiners accept the results of the National Board examinations, and a physician who graduates in Massachusetts and then passes the National Board is eligible for licensure in practically any state in the Union without having to take each state examination.

The National Board, therefore, seems a logical body to screen foreign-trained physicians, evaluate their competency, and certify them to state boards which could then determine whether or

not the candidate met other requirements for licensure.

The prime objective of all examining boards, of course, is to safeguard the public from poorly trained persons. For almost 50 years, every effort has been expended to keep the standards of our medical schools at the highest level, so as to produce the best possible physicians. Requirements for licensure vary in the different states, but they have all been elevated as medical schools have been improved. It has been suggested that a careful analysis of state medical-practice acts should be made, and some commonly acceptable yardstick or screening mechanism for evaluating professional ability of the foreign graduate should be developed.

It would seem that a procedure of this sort should prove fairer to foreign graduates. At the present time, graduates of 39 schools are presumed to have received the necessary basic training. That leaves the graduates of some 511 schools unaccounted for, since, for one reason or another, their schools have not been approved. The difficulties of investigating all schools are almost insurmountable, and it is possible some of the ones not yet surveyed might prove acceptable.

In the final analysis, it is the competence of the physician himself which should count. That holds true even for graduates of our own schools, since those who cannot pass an examination cannot be licensed. A similar yardstick applied to foreign physicians should prove fair to them, and yet be a real safeguard to the public.

We hope that some definite action along this line may evolve from this last meeting of the Congress on Medical Education and Licensure.

HIGH COST OF MEDICAL EDUCATION

Besides brains and a great deal of hard work and conscientiousness, a medical diploma costs \$9,200, according to a report published in the February issue of the *JOURNAL OF MEDICAL EDUCATION*. And since a third of the students interviewed expected to have to go in debt for \$3,500 apiece before finishing school, it is clear that doctors who contribute to such endeavors as the Educational Fund of the Iowa State Medical Society are performing a much-needed service.

Most of the 6,251 students covered in the survey showed reluctance to borrow from their parents, for one reason or another; about 95 per cent hoped to be able to raise what they needed elsewhere. Forty-eight per cent are single and living away from home, and most of the money for medical education for such students comes from their parents. But the married students are supported largely by the earnings of their wives. Total incomes of students (and of students' wives) approximates \$2,450 per year. Vacation earnings contribute only a small amount, \$550 on the average.

ANTIBIOTIC SENSITIVITY TESTS

Concern has been expressed in some quarters over the increasing incidence of resistance of pathogenic bacteria to certain of the antibiotic agents. In general, the incidence of resistance to any given antibiotic is proportional to the length of time during which that drug has been in clinical use. Resistant mutant strains have emerged during the clinical use of each of the antibiotics.

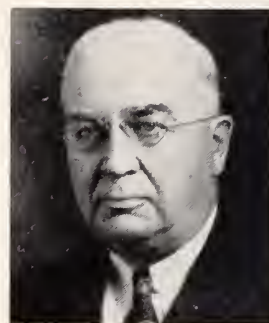
Another untoward effect of antibiotic therapy of infectious disease has been the alteration of normal bacterial flora, principally in the gut, so that resistant organisms have taken on pathogenic characteristics. Another, and sometimes more severe, infection replaces the one for which treatment was given in the first place. This is especially important in the use or orally administered broad-spectrum antibiotics. Candida and staphylococcus infections of the colon have sometimes brought about serious complications that have overshadowed the condition for which the drug was originally given.

If the hypersensitivity reactions, the depression of bone marrow, and the nephrotoxic and ototoxic effects of still other antibiotics are considered, one comes to the conclusion that the use of antibiotics is not wholly without danger.

One approach to the safe use of the antibiotic drugs is the restriction of their use to clearly infectious disease. Another, certainly, is the selection of a drug that has demonstrable effectiveness against the specific agent responsible for the disease. Various reports have shown that over 50 per cent of the strains of staphylococcus isolated are highly resistant to penicillin, and as many as 40 per cent are equally resistant to some of the broad-spectrum drugs. It would seem pointless to assume the risk of hypersensitivity reactions, candida or staphylococcus enteritis, or any of the other complications of these drugs, if the offending organism is resistant to the drug.

Methods in current use for demonstrating the resistance or sensitivity of an organism to a given antibiotic have been proved to be quite satisfactory. In a few cases the clinical effect has not correlated with *in vitro* studies, but in general, the correlation is high. The requirements are simply that the organism responsible for the infection be available for culture. Any competent bacteriologist has facilities at his command for testing the sensitivity of the organism to a wide variety of antibiotic drugs. Thus, the sensitivity or resistance of the organism to a number of antibiotics can be determined, and the clinical effect of each can be predicted.

Remember to attend the meeting of Blue Shield Participating Physicians, at 5:00 p.m., on Monday, April 26, in the Main Ballroom, of the Ft. Des Moines Hotel.



PRINCE E. SAWYER, M.D., F.A.C.S.
1874—1954

In Appreciation

A host of friends and colleagues were saddened to learn of the death of Dr. Prince E. Sawyer at St. Joseph Hospital, Sioux City, Sunday, January 17, 1954.

His last illness was due to an influenza infection with circulatory failure and a final cerebral vascular accident, and he was unconscious the last twenty-four hours.

Doctor Sawyer was born June 1, 1874 at Phillips, Maine. He attended Bates College of Lewiston, Me., before coming to Sioux City with his parents in 1889. Two years later he graduated from the University of the Northwest (now Morningside College). At the youthful age of 18, he came to Iowa City in the fall of 1892 to enter the Medical Department of the State University. He early became interested in football, and in 1894 was chosen captain of the university's football team. The records indicate that Iowa had a very good year under his captaincy.

The writer first came to know Prince when he returned from European study to assume the chair of pathology and bacteriology in September 1893.* Although Prince had a very good student record, he loved to tell of his final examination experience in pathology. According to his story, the "Professor" met him shortly before graduation in 1895 and stated, "Prince, that examination in pathology was not entirely satisfactory, and perhaps it should be repeated." It was suggested that he come to the Professor's office where he was given a new set of questions and left by himself for an hour's period. According to Prince, the professor stated, "The result was excellent, the best ever." Following his graduation in 1895 he practiced for a number of years in Hornick, Woodbury County, after which he entered upon a course of postgraduate study at the New York Postgraduate Medical College, completing the same in 1901. In 1902 he came to Sioux City and limited his practice to that of general surgery. He soon gained recognition in his chosen specialty, and his con-

* At the dinner of the State Board of Health on June 2, 1954 extended to the retiring Commissioner, two members of this first class in pathology were present, Dr. Lester C. Kern of Waverly, and Dr. Prince E. Sawyer of Sioux City.

sulting practice extended into the surrounding states of Nebraska, South Dakota and Minnesota. He early became interested in medical society organization, and his leadership was recognized by his election to the presidency of the Woodbury County Medical Society in 1907; the Sioux Valley Medical Society in 1908. He was chosen president-elect of the Iowa State Medical Society in 1935, and served as president in 1936. In 1947 he became president of the Iowa Clinical Surgical Society. He was most faithful in his society duties. During his year as president of the State Medical Society, he made one or more visits each month to the central office in Des Moines. He always drove his Cadillac car, and scorned any suggestion of making the 205 miles from Sioux City in much more than two hours.

In 1939 he was elected to alumnus membership in Alpha Omega Alpha Honor Medical Society by the Iowa University Chapter.

In 1945 he was appointed by Governor Robert D. Blue as a member of the Iowa State Board of Health, and was reappointed for four succeeding two-year terms. He was a faithful attendant at State Board meetings, and had an active interest in the newer developments of public health service in Iowa. A few days before the regular Board meeting, on January 12, 1954, he wrote the Commissioner, Dr. E. G. Zimmerer, that he might not be able to attend because of a "light flu attack," but "would try to be on hand." Fate willed it otherwise.

At the meeting on January 12, the Board recorded in its minutes a tribute of affection and appreciation of Doctor Sawyer, to be forwarded to him "with cordial greetings and best wishes for a speedy recovery." Fortunately this was received by Prince before he lapsed into final unconsciousness.

Doctor Sawyer added distinction to Iowa Medicine, and his genial personality charmed every circle in which he moved. We will miss Prince and his fine fellowship throughout the years ahead.

WALTER L. BIERRING, M.D.

THIRD INSTITUTE ON HEART DISEASE

An Institute on Heart Disease will be held at Sioux City on Friday, May 14, 1954, at the Mayfair Hotel.

The afternoon discussion will include recent advances in (a) Pathogenesis of atherosclerosis; (b) Treatment of coronary artery disease.

The evening program will be devoted to the diagnosis and surgical treatment of congenital heart lesions and chronic valvular disease.

A complete program will be sent out within the next 30 days.

These institutes are sponsored by the Speakers Bureau, Iowa State Medical Society; Iowa Heart Association; and the Division of Heart Disease, State Department of Health, in cooperation with the College of Medicine, State University of Iowa.

MEETINGS OF STATE SOCIETY OFFICERS AND COMMITTEES

BOARD OF TRUSTEES

February 11, 1954

The Board of Trustees of the Iowa State Medical Society met on February 11, 1954, at 1:30 p.m. with the following in attendance: Drs. L. A. Coffin, R. N. Larimer, G. V. Caughlan, A. B. Phillips, N. B. Anderson, J. W. Billingsley and W. L. Downing, Miss Mary L. McCord and Mr. Donald L. Taylor.

After the minutes of the previous meeting had been read and approved, and the payment of bills had been authorized, the budget for 1954 was reviewed and certain specific changes were authorized so that it might be balanced. The budget was then approved as amended.

The report of the Board of Trustees for publication in the 1954 House of Delegates' Handbook was approved, and so that it might be clear to what date the reports in the Handbook extend, it was ordered that "March 1, 1954" be printed on the flyleaf.

At the request of the editor of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY, Dr. Everett M. George, the Board reviewed an article entitled "A Method for Equal Representation in the Iowa State Medical Society," which had been submitted for publication with the specified request that it appear in the April, 1954, issue. The Board directed Dr. George to inform the authors that their paper could be published as an open letter to the editor, but without the full-page tabulations that they had submitted with it.

The Board approved Dr. George Scanlon's sending a letter to all of the exhibitors at the Society's annual meeting, soliciting loans or gifts to the Educational Fund.

A letter from Dr. H. E. Farnsworth about counting resident physicians with temporary licenses in determining the number of delegates to which a county society is entitled was taken up. The Board pointed out that the Articles of Incorporation limit membership in the Iowa State Medical Society to physicians who have licenses to practice medicine, as distinguished from temporary licenses.

A JOURNAL exchange with the University Library, Lund, Sweden, was approved, and the board authorized the reinvestment of the \$1,000 from a matured savings bond in a long-term Treasury bond.

The board purchased 250 reprints of Dr. W. M. Sproul's article on ethic, which appeared in the February issue of the JOURNAL, and directed that a letter and the Iowa resolution on combined billing be sent to the presidents and secretaries of the various state medical societies over the signatures of Dr. Larimer and Dr. Phillips.

The next meeting was set for 11:00 a.m., March 28, and the meeting adjourned at approximately 5:30 p.m.

President's Page

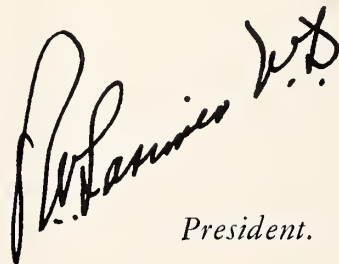
The National Health Plan picture is shaping up rather rapidly. The bills in Congress which are receiving considerable support, include:

- (1) A proposed extension of the Hill-Burton Act.
- (2) A new bill on Federal Mortgage Loan Insurance to medical groups giving professional care, on prepayment basis, in their own hospitals and clinics.
- (3) A recommendation for Federal reinsurance on various insurance risks which are "catastrophic."

It would seem that efforts are being made to expand and help finance group practice by Federal loans. We feel that the Iowa Congressmen, as a group, will be inclined to adopt the AMA position on these various proposed programs; however, legislation favoring disease prevention and rehabilitation may find favor. Later, our own Legislative Committee may ask for assistance in regard to the national legislation. In the meantime all physicians should follow the actions of Congress as outlined in the *Journal of the American Medical Association*.

The response to the osteopathic questionnaire has been gratifying, and obviously many doctors have spent considerable time in thinking about their answers. These will be reported to you later. We urge that if you have not completed your own questionnaire, you do so, so that your officers may be guided by your wishes.

The State Meeting is not too far away. The program which is in this issue of the JOURNAL includes something of interest to every doctor. Your plans should include at least one day at the State Meeting, as well as attendance at the sessions of the House of Delegates, and some of the reference committees.

A handwritten signature in dark ink, appearing to read "W. B. Harrison". The signature is written in a cursive, flowing style. Below the signature, the word "President." is printed in a serif font.

President.

BLUE CROSS



BLUE SHIELD



New Director of Physician Relations, Blue Shield

Mr. Wilbur R. Quinn, formerly Assistant Executive Secretary of the Sioux City Blue Cross Plan, has been appointed Director of the Blue Shield Physician Relations Department effective Feb. 1.

He replaces Mr. Donald L. Taylor, now Executive Secretary of the Iowa State Medical Society, who was formerly serving as Director of Physician Relations on a part-time basis as well as being Associate Executive Secretary of the Medical Society.

Mr. Quinn comes to the organization with wide experience in the field of voluntary health insurance and close contact with the medical profession. From March 1944 to January 1947, he served as an officer in the Medical Administrative Corps in Army Air Force hospitals. Following his discharge, he was appointed Executive Director of the Iowa Blue Shield Plan and served in that capacity until February, 1950. It was during the latter period of service that he did much to guide

the constantly expanding Blue Shield program, by conducting countless interviews with individual physicians and county medical societies, in cooperation of Mr. Taylor.

Later in that same year, Mr. Quinn accepted the position of Assistant Executive Secretary of the Sioux City Blue Cross Plan and was instrumental in helping it expand Blue Cross enrollment over 20 per cent. Membership in surgical-medical coverage grew more than 300 per cent while he was director of the enrollment department there.

In his new position, he will work closely with the Iowa State Medical Society, the Blue Shield, the two Blue Cross Plans in Iowa and also the Iowa Hospital Association.

BLUE SHIELD MONTHLY STATISTICS

Members, estimated as of December 1, 1953 436,307
Claims processed for payment in January 10,351
Amount paid in claims during January \$320,407.79

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

THE CHEST: A Handbook of Roentgen Diagnosis, by Leo G. Rigler, M.D., Second Edition (Chicago, The Year Book Publishers, 1954. \$8.00).

MUSIC THERAPY, by Edward Podolsky, M.D. (New York, The Philosophical Library, Inc., 1954. \$6.00).

CLINICAL ENDOCRINOLOGY, by Karl E. Paschkis, M.D., Abraham E. Rakoff, M.D., and Abraham Cantarow, M.D. (New York, Hoeber-Harper, 1954. \$16.00).

ANTIBIOTICS ANNUAL 1953-1954: Proceedings of the Symposium on Antibiotics, October 28, 29 and 30, 1953, Washington, D. C., sponsored by the U. S. Department of Health, Education and Welfare, Food and Drug Administration, Division of Antibiotics, in collaboration with the Journal of Antibiotics & Chemotherapy (New York, Medical Encyclopedia, Inc. \$8.00).

DERMATOLOGIC MEDICATIONS, by Marguerite Rush Lerner, M.D., and Aaron Bunsen Lerner, M.D. (Chicago, The Year Book Publishers, 1954. \$3.50).

BOOK REVIEWS

ANATOMY OF THE NERVOUS SYSTEM, by S. W. Ransom, M.D. and S. M. Clark, M.D., Ninth Edition, (Philadelphia, W. B. Saunders Co., 1953. \$8.50).

The ninth edition of a time-honored classic, originally written by the late Stephen Ransom and edited by S. M. Clark, again is a valuable reference for all students of neurology. This volume has 434 illustrations, 18 in color, and comprises 534 pages, exclusive of a comprehensive bibliography and index.

The chapters on the cerebellum present some new thoughts which point toward a better understanding of this complex organ, and the clinical illustrations are definitely improved.—Walter D. Abbott, M.D.

PEPTIC ULCER, Pain Patterns, Diagnosis and Medical Treatment, by Lucian A. Smith, M.D. and Andrew B. Rivers, M.D., (New York, Appleton-Century-Crofts, Inc., 1953. \$12.50).

This new book on peptic ulcer is written from the medical viewpoint. The subject is thoroughly covered. The make-up, with its large headings, adequate spacing between subjects, and frequent illustrations, enables the reader to cover the material quickly, and Dr. Smith's lucid mind has made the reading easy.

Perhaps the most unusual thing about the book is the inclusion of many sidelights of the ulcer problem, such as the description of the symptoms of esophageal ulcer, of the ulcer associated with Meckel's Diverticulum, of the ulcer of the postoperative stomach, of the problem of intractable pain, and of the anatomy of various types of ulcer pain. Of course, the usual facets of the ulcer problem are also well covered.

Another attractive element in the book is the absence of "padding." The authors described only that which had to be described and then stopped. One did not have to peruse a mass of verbiage to arrive at the subject of inquiry. Altogether, this book should be an admirable addition to the library of any physician

interested in adult disease problems.—Daniel A. Glomset, M.D.

PHYSIOLOGY OF THE EYE: Clinical Application, by Francis Heed Adler, M.D., Second Edition. (St. Louis, C. V. Mosby Co., 1953. \$13.00).

This is the second edition of Doctor Adler's book, which was first published in 1950.

There is not a great amount of new material in this book, as becomes evident when one looks at the Bibliography, which contains few references of a more recent date than 1950.

This statement, however, is by no means intended to discredit the quality of the book, which is by any standard an outstanding piece of work.

Most of the new material is found in the chapters on the cornea, aqueous humor and vitreous. Of special interest is the discussion of the different theories about the formation of the aqueous.

One of the author's principal fields of interest has always been ocular motility, and this is reflected by the fact that the chapter on ocular muscles and binocular vision makes up fully one-fourth of the total content of the book.

While there is a wealth of theoretical material, the clinical aspect of the subject has not been neglected, a fact which makes the book equally valuable as a reference in research and in clinical practice.

Whenever it seems of value to the better understanding of ocular physiology, reference is made to general physiology, especially in regard to the muscles, nerves and circulation. This is another point which adds to the value of the book.

In conclusion, it can be stated that this volume should have a place in the library of every ophthalmologist.—Henry H. Gurau, M.D.

YEARBOOK OF GENERAL SURGERY (1953-54 Yearbook Series), edited by Evarts A. Graham, M.D., (Chicago, The Year Book Publishers, 1953. \$6.00).

This book, from the 1953-1954 Year Book Series, contains well selected abstracts of current surgical literature from Journals received between June, 1952 and May, 1953. Each abstract contains a reference to the journal where the original article may be found. The articles are most timely and are grouped into 30 various sections dealing with practically all the general and specialized fields of surgery. The very informative and important section on anesthesia discusses ventilation, inhalation and regional anesthesia, muscle relaxants, fluid and electrolyte balance, etc. The editor has thoughtfully "dropped many pearls" by means of his comments following many of the articles.

Although all of the important papers written during this series could not be included, certainly many of them have been. This book is most useful for those who want to review the recent advancements in surgery, but do not have time or access to the various periodicals.—R. M. Knox, M.D.

Iowa Academy of General Practice

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1954 SCIENTIFIC ASSEMBLY PROGRAM

The American Academy of General Practice is holding its 6th Annual Scientific Assembly in Cleveland, Ohio, on March 22 through 25. This will be another outstanding formal postgraduate study course and, as usual, will be conducted by some of America's best-known teachers. However, there will be an unusually distinguished British guest, Sir Alexander Fleming, who is to address the Assembly at 1:00 p.m. Wednesday on the "Beginning of Antibiotic Therapy." Dr. E. J. McCormick, the President of the American Medical Association, will give the opening address, at 1:30 p.m. Monday, on "The Physician as a Citizen." Another high light will be a live clinic on "Rehabilitation" by Howard A. Rusk, M.D. from 4 till 5 p.m. on Monday.

Although these speakers and subjects are mentioned as unusual, and perhaps justly so, still it seems unfair to stop there when the program is explored further. If we were writing for the movies, it would be an easy matter to go overboard and announce a "Star-studded Extravaganza" and in doing so we would be indulging in somewhat less exaggeration. Every speaker is renowned in his field, and the Committee on Scientific Assembly that arranged this program is to be sincerely congratulated for a big job well done. No wonder these assemblies draw large registrations of general practitioners from all over the country, Hawaii, Alaska, and the West Indies. The attendance speaks for their value.

CONGRESS OF DELEGATES

Along with the scientific portion of the Annual Assembly, the important annual business meeting is held. Our organization calls this meeting its Congress of Delegates. In Cleveland, the Congress convenes on Saturday, March 20 at 2 p.m. Either the Congress itself or its reference committees will be in session until Monday noon. Many important items are on the agenda this year—things which should be of deepest interest to every general practitioner in America. There is always ample seating room for visitors at the Congress itself, and anyone has the privilege of presenting his views in the reference committees. In fact, active participation in these reference committee meetings makes the formulation of decisions more democratic.

SOCIAL ACTIVITIES

On Monday evening, there will be the annual dinner for the officers of the State Chapters. The dinner for the delegates will be held on Tuesday evening.

The social highlight of the Assembly will be the President's Reception and Dance, on Wednesday evening beginning at 9:00 p.m. Because there is no room in Cleveland to hold a banquet for more than 980 persons, a banquet cannot be held for all of our doctors and their wives. So this function has been planned. In addition to your officers, Sir Alexander Fleming and Lady Fleming will be in the reception line. A fine orchestra has been engaged for the dancing which will follow the reception. It will not be a formal affair.

A special series of events has been planned for our ladies. They are all asked to register and are invited to participate in the activities arranged for their pleasure. They are invited to attend the scientific sessions on Monday afternoon, where the program will include many features to hold their interest. A luncheon and fashion show will be held Tuesday noon at Carter Hotel. Plans for a tour of Cleveland have been made for Wednesday afternoon. And, of course, there will be the President's Reception and Dance Wednesday, as has been mentioned.

IOWA CHAPTER LUNCHEON

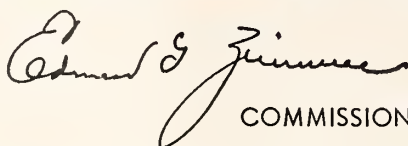
There will be a luncheon for the doctors from Iowa and their wives on Wednesday noon at Hotel Cleveland. Tickets will be on sale at the ticket booth at registration headquarters on Tuesday and Wednesday. If you will buy your tickets there, it will help us make adequate arrangements with the hotel, but if you do not find that convenient, we want you to come anyway. The luncheon in St. Louis a year ago was well-attended.

IOWA STATE MEDICAL SOCIETY

Tentative plans have been made for our annual Academy-sponsored luncheon for Iowa General Practitioners at the annual meeting. We expect to make the announcement of definite plans in the April JOURNAL. Watch for it.

**DO NOT FORGET
CLEVELAND
MARCH 22-25**

STATE DEPARTMENT OF HEALTH


COMMISSIONER

BRUCELLOSIS CONTROL AND THE MARKET MILK LAW

The Fifty-Fifth General Assembly of the State of Iowa made some very important revisions of the market milk law which are of vital interest to county, city and school health officers and general practitioners, as well as to dairyman.

This Amendment, which becomes effective January 1, 1955, provides three plans for the control of brucellosis in cattle, one of which must be adopted in herds that produce milk for Grade A pasteurization. The three plans are:

Plan A

Test annually all cattle more than eight months of age except steers and official calfhood vaccinates until 36 months following date of vaccination. Slaughter all reactors, with indemnity payments as provided by State and Federal regulations. Official calfhood vaccination to be optional with the herd owner.

Plan B

Test annually all cattle more than 8 months of age except steers and official calfhood vaccinates until 36 months following date of vaccination. All reactors are to be identified and quarantined on farm, provided that the owner may at his option retain such cattle for breeding purposes in accordance with the rules and regulations of the Department. If a calfhood official vaccinate reacts, the animal may be quarantined on the farm and retested within 60 days, at the owner's expense. Official vaccination of all female calves between the ages of 4 and 8 months.

Plan C

Official vaccination of all female calves between the ages of 4 and 8 months. The herd must be composed entirely of official vaccinates.

Nothing contained herein relating to said plans of control shall invalidate ordinances or regulations of any municipal corporation providing for control of brucellosis by procedures other than the foregoing three plans of control, so long as said ordinance or regulation shall embody plans and procedures approved by the United States Bureau of Animal Industry and the Iowa Department of Agriculture.

Official calfhood vaccination as described in

Section 164.1 of the 1950 Code of Iowa is as follows:

"Official calfhood" shall mean the vaccination of any calf between the ages of 4 and 8 months with *Brucella abortus* vaccine strain number 19, or such other vaccine as may hereafter be approved by the U. S. bureau of animal industry, by a licensed, accredited veterinarian according to the rules and regulations established by the Secretary of Agriculture. The officially vaccinated animal shall also be identified by a tattoo mark, and such tattoo mark shall be described in a certificate furnished by the attending veterinarian.

Within 30 days following such vaccination, the attending veterinarian shall supply the owner with a certificate of vaccination. The veterinarian shall retain a copy and forward a copy to the local office of the U. S. bureau of Animal Industry and also a copy to the Iowa Department of Agriculture. The Veterinarian's certificate covering the official vaccination shall entitle the vaccinated animal to be consigned to sales and exhibited at shows within the state at any time during the period of two years following the date of vaccination.

Plan A should be the eventual goal of every dairyman, although the initial program may have to be started with Plans "B" or "C." Under Plan "A," the owner may sign the State-Federal Cooperative Agreement with his veterinarian to qualify for a free test and receive indemnity on all reactors, provided all reactors are slaughtered within 30 days following the completion of the test.

Plan B provides for an annual test of all cattle over 8 months of age, except steers and official vaccinates that have not been vaccinated more than 36 months.

Reactors to the test may be retained on the farm for breeding purposes without benefit of indemnity, provided they are identified and held separate and apart from all other animals.

Milk from reactors is not to be sold for human consumption.

Official calfhood vaccinates which react to the agglutination test may be held in quarantine and retested at the owner's expense 60 days after the reacting test. *Plan B* recognizes the official vaccination of all female calves between the ages of 4 and 8 months.

Plan C is intended for a herd which is composed entirely of official vaccinates. Of course, if the dairyman plans on staying in Plan C, he must continue to vaccinate.

Regardless of the program chosen, proper records must be registered by the veterinarian with the Iowa Department of Agriculture, State House, Des Moines, Iowa.

An extensive program for the control of brucellosis in cattle is now being carried on in cooperation with the Bureau of Animal Industry, the Extension Service and the Iowa Department of Agriculture. The law provides that the Iowa Department of Agriculture shall be the administrative agency.

The primary object of the program is the control and finally eradication of brucellosis from live-stock and to produce a safer and more palatable dairy product for the consuming public.

GRADE A RAW MILK FOR PASTEURIZATION DEFINED

CURRENT REQUIREMENTS PERTAINING TO BRUCELLOSIS

Herds must be certified as following either Plan A or Plan B approved by the U.S.B.A.I. These plans are as follows:

Plan A (U.S.B.A.I.)

1. Test all animals more than 6 months of age, except steers. (Official calfhood vaccinates need not be tested until 30 months of age.)
2. Immediate slaughter of reactors. Indemnity payments if federal and state funds are available.
3. Retest infected herds at intervals not to exceed 30 days until the disease is eradicated. Annual retest of negative herds.
4. Official calfhood vaccination is optional with the owner.
5. All additions to herds shall be brucellosis free.

Plan B (U.S.B.A.I.)

1. Annual test of all animals more than 6 months of age except steers. (Official calfhood vaccinates need not be tested until 30 months of age.)
2. Temporary retention of reactors (identified and quarantined on farm) until they can be disposed of by slaughter without excessive loss to the owner. A dairyman operating under this plan should eliminate a sufficient number of reactors each year so that all reactors will have been removed within a period of 3 years after his entry into Plan B.

The Iowa Grade A milk law provides that reactors that are retained under Plan B are identified and quarantined on the farm and may be used for breeding purposes in accordance with rules and regulations of the Iowa Department of Agriculture.

3. Official calfhood vaccination.

There is no provision for Plan C under this ordinance.

UNDRESSED WOUNDS HEAL SATISFACTORILY

In certain cases, satisfactory healing of surgical wounds can be obtained without the application of postoperative dressings, it has been reported in the ARCHIVES OF SURGERY for November, 1953.

Carl J. Heifetz, M.D., Frank O. Richards, M.D., and Montague S. Lawrence, M.D., all of St. Louis, based their conclusion on two studies of 150 patients. One study involved 102 patients in whom satisfactory healing was obtained without dressings. In the second study, 48 patients were observed. For comparative purposes, they were divided into three groups—those in whom wounds were covered at the termination of the operations by the customary gauze dressings, those in whom wounds were covered by similar dressings which were removed 24 hours after the operations and those in whom wounds were left without dressings. Equal and satisfactory wound healing occurred in all three groups.

"The advantages of leaving dressings off include the opportunity to observe the wounds more often, avoidance of irritation from adhesive tape, economies in surgical supplies and in time and effort of hospital personnel and surgeons, and occasionally reduction in hospital stay," the doctors said.

"A close examination of the data," they went on to observe, "suggests that bacterial counts were often lower when the wounds were left without dressings, but the statistical analyses show that this tendency could be explained on the basis of chance variation." Anyway, they are of the opinion that the concept, generally held since the beginning of the aseptic era in surgery, that dressings aid in preventing bacterial infection ought no longer to go unquestioned.

MORBIDITY REPORT

Diseases	Jan. 1954	Dec. 1953	Jan. 1953	Most cases reported from these counties
Diphtheria				
cases	3			
carriers	2	2	4	Pottawattamie (all cases and carriers)
Scarlet Fever	237	125	147	Black Hawk, Polk, Union
Typhoid Fever	0	1	5	.....
Smallpox	0	0	0	.....
Measles	1037	461	421	Cerro Gordo, Dubuque, Franklin, Henry
Whooping				
Cough	23	111	17	Polk, Scott
Brucellosis ..	18	18	21	Scattered
Chickenpox ..	989	414	1040	Boone, Des Moines, Dubuque, Harrison
Meningococcus				
Meningitis	4	3	10	Guthrie, Linn, Mills, Union
Mumps	363	172	169	Des Moines, Dubuque, Story
Poliomyelitis	1	14	7	O'Brien (paralytic)
Rabies in				
Animals ...	12	7	18	Scattered
Infectious				
Hepatitis ..	264	162	106	Appanoose, Polk, Webster
Tuberculosis	37	32	48	For the state
Gonorrhea ..	66	63	118	For the state
Syphilis	159	133	178	For the state

WOMAN'S AUXILIARY to the IOWA STATE MEDICAL SOCIETY

Organized May 9, 1929, Des Moines, Iowa

Annual Meeting—Twenty-Fifth Anniversary

PROGRAM

MRS. EDWARD B. HOEVEN, *President*, presiding

Monday, April 26

East Room—Hotel Savery

- 8:00—4:00 Registration—All physicians' wives welcome
Continental Breakfast—Courtesy State Auxiliary
9:00—11:30 Executive Board Meeting
Roll Call of Voting Delegates
Reports of Councilors
Reports of Committee Chairmen
Report of Nominating Committee, first reading—Mrs. H. C. Merillat, Chairman
11:45 Optional—Free Time—Reservations should be made for Luncheon and Style Show—Younkers Tea Room—Dutch Treat
2:15—3:15 Tour of Meredith Publishing Company—Courtesy, Meredith Publishing Company. Transportation—Cars will leave from Hotels Savery and Fort Des Moines at 2:00.

Tuesday, April 27

Terrace Room—Hotel Savery

- 8:00—11:00 Registration—Auxiliary and Future Nurses
9:00 General Session—Mrs. Edward B. Hoeven, President, Presiding
9:10 Invocation—Rev. Frederick J. Weertz, D.D., St. John's Lutheran Church
9:15 Welcome—Mrs. Benjamin F. Kilgore, President Polk County Auxiliary
Auxiliary Pledge of Loyalty (all members):
I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals.
9:20 Response—Mrs. Lester R. Hegg, President-elect
9:25 Greetings—L. A. Coffin, M.D., Chairman of Board of Trustees
9:30 Roll Call of Voting Delegates
9:35 Address—Dwight G. Rider, Ft. Dodge, President, State Board of Education
9:50 In Memoriam—Mrs. George Watters
Organ Accompaniment—Mrs. Elmer A. Vorisek
9:55 Presentation of Convention Chairmen—Mrs. Noble Irving, Jr.
10:00 Parliamentary—Mrs. James A. Downing—Election Instruction.
10:05 Report of Nominating Committee—second reading—Mrs. H. C. Merillat

- Nominations from the floor
10:15 Election of Officers
Introduction of New Officers—Mrs. Edward B. Hoeven, President
10:20 Iowa Lutheran School of Nursing—Nurses' Chorus. Director—Mrs. Hannah Potter
10:50 Presentation of Future Nurses—Mrs. E. A. Larsen
11:00 Response—Club Members and Sponsors—by counties—by F. N. C. representative
11:30 Future Nurses Luncheon—Broadlawns General Hospital. Tour of Broadlawns General Hospital
12:15 Annual Luncheon—Terrace Room
Mrs. Edward B. Hoeven, President, presiding
Robert N. Larimer, M.D., President Iowa State Medical Society
Gerald V. Caughlan, M.D., President-elect, Iowa State Medical Society
Walter Martin, M.D., President-elect, American Medical Association
Mrs. George Turner, President-elect, Woman's Auxiliary to the American Medical Association
Awarding Past Presidents Pins—Mrs. George Turner
Announcement of County Exhibit Winners—Mrs. Frederic Loomis
Door prizes awarded during luncheon—Mrs. Noble Irving, Jr.
Luncheon Music—Mrs. Elmer A. Vorisek
2:00 Presentation of "The Women," a comedy by Clare Booth Luce—Drama Department of Des Moines Women's Club
7:00 Banquet—Fort Des Moines Hotel

Wednesday, April 28

East Room—Hotel Savery

- 8:00 Breakfast
Board Meeting—Mrs. Edward B. Hoeven, President, presiding
Election of Delegates for National Convention A.M.A., San Francisco
Business Meeting
Installation of Officers—Mrs. George Turner
Presentation of Gavel to Mrs. Lester R. Hegg, President
Post Convention Board Meeting—Mrs. Lester R. Hegg, presiding
Adjournment

A LETTER FROM THE PRESIDENT

Dear Members of the Auxiliary:

Last night (January 30) I returned home from Des Moines, concluding a two day session of program planning for our SILVER ANNIVERSARY MEETING April 26, 27, 28.

Also in attendance were Mrs. Dean King, 2nd Vice President and Program Chairman, and members of Polk County Auxiliary, who, largely, are responsible for the detailed planning which will make your ANNUAL MEETING one long to be remembered. The Chairman for Convention is Mrs. Noble Irving, Des Moines, and the co-chairmen are Mrs. Benjamin F. Kilgore and Mrs. H. C. Merillat, also of Des Moines.

The CONVENTION COMMITTEE is planning an excitingly different program. We hope that all of you will come, and we sincerely hope that you will enjoy the three days of fun and good fellowship.

The complete program will be mailed to you; it will be published also in the March issue of the IOWA STATE MEDICAL JOURNAL.

Of course we would not for a moment suggest that doctors play hooky from their scientific meetings. But we do want them to know that they are welcome to attend our ANNUAL LUNCHEON and stay for the show: a comedy "The Women," by Claire Booth Luce, which is the afternoon feature.

We suggest that those members wishing to "bring their husbands" make reservations early.

Another tantalizing bit of advance information is—LOVELY DOOR PRIZES. Do you feel lucky?

... And now some REMINDERS TO COUNTY PRESIDENTS: Have you elected your delegates to the STATE CONVENTION? You are entitled to send one for every 25 members or major fraction thereof. And the county president, of course, is a voting delegate. Please send their names to your state president and to the State Secretary, Mrs. Robert Mason, 5818 Chamberlain Drive, Des Moines.

Have you mailed your year's report to the state president? Your report is a record of your achievements and your leadership. We should appreciate having it promptly for the Annual Reports. For the record, please include the names of members and their addresses on a separate list.

Do the president and the secretary have a correct list of your new officers and chairmen of standing committees? Have you publicized the PROGRAM FOR ANNUAL MEETING in your own group? Have you contacted every physician's wife and invited her to become a member? Have you mailed a check to your State Treasurer, Mrs. Howard Smead, 3333 Grand Ave., Des Moines, for state and national dues?

Has every county received Year Books? If not, please write to your president or to Mrs. Hazel Lammey, 529 36th Street, Des Moines,

stating the number you wish, and they will be mailed promptly. The Year Books contain the names of national, state and county officers and members-at-large; they also contain condensed guidance for auxiliary officers. They are purse size and indispensable for active members.

Are you giving your TODAY'S HEALTH Chairman active aid and encouragement? Is every member of your auxiliary a subscriber? Is the magazine on the reading table in your husband's office? Are you keeping in mind the gift value of a subscription to TODAY'S HEALTH every day in the year, as well as at Christmas time?

Our congratulations go to Dubuque county and its TODAY'S HEALTH Chairman, Mrs. Gerald F. Keohen; *they made the Exclusive Club*. If your county is lagging, you still have time.

If you have recommendations or subject matter which you wish discussed at the Annual Meeting, please send it to the president before March 15. If it is favorably passed upon by the advisory committee, it will be placed on the agenda.

Finally, remind your husband to make his hotel reservation early.

With kind regards, and looking forward to seeing you in Des Moines in April, I am,

Very sincerely,
MRS. EDW. B. HOEVEN

FARM BUREAU AND STATE SOCIETY MEETING

It was a privilege to attend the dinner meeting held at the State Medical Society Headquarters the night of January 26. State representatives of the Farm Bureau of Iowa and the new Dean of the Medical College, Dr. Norman Nelson, of Iowa City, and representatives of the State Medical Society had an opportunity to get acquainted. The purpose of the meeting was to further the fine relationship which has existed between the Farm Bureau and the State Medical Society.

Mr. Hill, President of the State Farm Bureau, indicated the desire of that organization to cooperate with the Medical Society to help solve problems the voluntary way and to maintain freedom for this great nation.

Farmers present indicated concern that many small towns are without medical doctors and asked for ways and means to remedy this situation.

Mrs. Inman, State President of the Farm Bureau Women, who was a speaker at the Annual Meeting of the Auxiliary last year, was present at this meeting. She is eager to help direct rural women in their programs for better public relations and health education.

Dr. Nelson is particularly impressed with the outstanding work which Iowa has done in Cancer Control. He gave assurance of making every effort to maintain a fine medical college for the state.

MRS. LESTER R. HEGG,
President-Elect

ANNUAL MEETING OF THE WOMAN'S AUXILIARY TO THE A.M.A.

The Thirty-first Annual Meeting of the Woman's Auxiliary to the American Medical Association will be held in San Francisco, California, June 21 through 25, 1954.

Hotel reservations are being handled by the convention housing bureau, of which Dr. John J. O'Connor, is chairman. Address: Room 200, 61 Grove Street, San Francisco 2, California. It would be wise to make hotel reservations as soon as possible, using the reservation blank in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

A holiday tour to Hawaii has been planned following the A.M.A. convention, and the Hawaiian Medical Association has announced a scientific program for the physicians participating in the tour. Many delightful social affairs and island tours have also been planned. Complete information may be secured by writing to A.M.A. Headquarters.

FOURTH DISTRICT MEETING

A meeting of the Fourth District was held at the home of Mrs. Joe Krigsten, District Councilor, in Sioux City, January 16, with an attendance of 25. Mrs. Lawrence Pierson, of Sioux City acted as co-hostess. Guests of honor included Mrs. Lester R. Hegg, of Rock Rapids, President-Elect

of the Iowa Auxiliary, and Mrs. Charles Flynn, of Clarinda, Vice President.

Former State President of the Auxiliary, Mrs. Howard W. Smith, of Woodward, is the President-Elect of the Iowa State Health Council. Mrs. C. N. Maplethorpe, of Toledo, a member-at-large is a member of the Executive Board of the Iowa State Health Council.

COUNTY AUXILIARY ACTIVITIES

Boone

Members of the Boone County Medical Society entertained their wives at a dinner-dance Tuesday evening, January 12, at Sunset Inn. Arrangements were in charge of Dr. F. N. Johnson, Dr. Gerald Sutton and Dr. Enfred Linder, who prepared a unique and clever program based on the TV and radio show "Dragnet." Presented as a parody, the three doctors played a tape recording which they had prepared in advance in which they impersonated various other doctors of the Society as members of the cast of "Dragnet." The improvisations provided a most entertaining and humorous program. Following the entertainment, the rest of the evening was spent in dancing to recorded music.

The Boone Medical Auxiliary met Tuesday eve-

March 1, 1954

Dear President,

As chairman of exhibits for our Iowa Woman's Auxiliary to the State Medical Association, I want to enlist your help in the selection of an exhibits chairman for your local organization:

1—Pick an artist, if you have one (they are notably 11th-hour, and work better under pressure)

2—Have her assemble, compose or procure:

A poster, a diagram, a scrapbook, a puppet show

or any other 2 or 3 dimensional device

*{ mobiles ✓
hand bills ✓
stage set ✓*

★ for attracting attention!

★ for getting your 1953-54 most workable ideas and projects before the women and their husbands who will be attending state convention in April.

3—Have her write to me for any further suggestions or helps.

4—Have her bring her materials early on the opening Sunday afternoon, so that all may be effectively labelled and arranged before the guests start arriving and looking.

*Mrs. Frederic Loomis
5 South Hackett Rd.
Waterloo, Iowa*

*Sincerely,
Jessie Loomis*

ning, January 26, for dinner at the Lincoln Restaurant. The business meeting which followed was held at the home of Mrs. W. H. Longworth. The following officers were elected: Mrs. John Her- man, President; Mrs. R. E. Gunn, Vice President; Mrs. Gerald Sutton, Secretary; Mrs. F. N. John- son, Treasurer.

MRS. SOLVEIG MICHAELSON

Cass

The Woman's Auxiliary of the Cass County Med- ical Society chose Mrs. J. F. Moriarty, President; Mrs. Jack La Rue, of Anita, Vice-President; and Mrs. L. L. Long, of Atlantic, Secretary-Treasurer, for 1954.

Dubuque

New officers for the Dubuque County Auxiliary are: Mrs. D. C. Sharpe, President; Mrs. L. Alt, Vice President; Mrs. E. Olin, Secretary; Mrs. Edward Thorsness, Treasurer. All of these officers are residents of Dubuque.

Hamilton

The Hamilton County Auxiliary held a regular meeting at the home of Mrs. George A. Paschal on January 15. The following officers were elected: Mrs. J. L. Ptacek, President; Mrs. R. C. Crump- ton, President-Elect; Mrs. F. F. Hall, Secretary- Treasurer.

Miss Loretta Ryan, school nurse, was a guest. A resolution was passed to assist all county stu- dents who are interested in the nursing profession, but do not have a Future Nurses Club in their schools.

MRS. W. B. MCGAHEY

Lyon

The Auxiliary to the Lyon County Medical Soci- ety elected Mrs. John Lavender, of George, Pres- ident, and Mrs. H. H. Gessford, of George, Sec- retary-Treasurer, for 1954.

Page

New officers of the Page County Auxiliary are: Mrs. Earl N. Bossingham, Clarinda, President; Mrs. C. H. Brush, Shenandoah, Vice President; Mrs. Karl Catlin, Clarinda, Secretary-Treasurer.

A Future Nurses Club was started in the Shen- andoah High School with the Page County Auxil- iary acting as its sponsor. Mrs. Harold Henstorf, a member of the Page County Nurse Recruitment Committee, attended their first meeting, and Mrs. J. J. Lilly, school nurse at Shenandoah, is the school sponsor of the organization.

MRS. CHARLES H. FLYNN
First Vice President

Polk

The Polk County Medical Auxiliary designated January as membership month. "Be a member and bring a member" was the theme of their meeting on January 22. Dr. E. P. Lovejoy, President of the Polk County Medical Society, spoke on "The Role of the Woman's Auxiliary in Organized Medicine."

A report from the committee for Services to the Severely Disabled in the State of Iowa was pre- sented by Mrs. J. E. Dyson. The members of the Polk County Medical Society voted to give \$25 for the purchase of sheeting as their contribution to this organization.

MRS. HOWARD G. ELLIS

Wapello

The Wapello County Auxiliary met on January 5 at the home of Mrs. Loren Cappoc, at which time the following members took office: Mrs. Kenneth Lister, President; Mrs. Robert Krause, Vice Pres- ident; Mrs. Robert Dalager, Secretary; Mrs. T. L. Vineyard, Treasurer; Mrs. L. A. Taylor, President- Elect. After the business meeting, Mr. Richard Ackley, County Attorney, gave an address on "Juvenile Delinquency."

MRS. W. D. MAXIER

SPEAKERS' BUREAU SCHEDULES

RADIO

WSUI—IOWA CITY

Tuesday at 11:45 a.m.

"THE STORY OF SURGERY"

March 2 How Do You Know When You Need Surgery?

"MAIN STREET MEDICINE"

March 9 Rural Community Health Center
March 16 Human TB Accreditation
March 23 Doctor's Emergency Service
March 30 Medical Scholarship

WOI—AMES

Thursday at 11:15 a.m.

"TIME OUT"

March 4 Sleep
March 11 Play
March 18 Leisure
March 25 Work

TELEVISION

WOI-TV—AMES

Friday at 8:00 p.m.

March 5 How Is Cancer Recognized?
March 12 Surgical Treatment of Cancer
March 19 Radiological Treatment of Cancer
March 26 Cancer Is Curable

Attorney General Leo A. Hoegh Issues an Official Opinion Upon

The Corporate Practice of Medicine by Hospitals and the Division of Fees By Physicians

February 19, 1954

Board of Medical Examiners
Division of Licensure
State Department of Health
Des Moines, Iowa
Gentlemen:

We have your recent request for an opinion in which you set forth facts and questions as follows:

"(a) A physician who specializes in diagnostic radiology, which consists of the diagnosis of disease and injury by the use of x-ray films, has entered into a contract with an Iowa non-profit corporation engaged in operating a general hospital. The corporation maintains a department with the necessary x-ray equipment for the taking and developing of x-ray films at the hospital and employs the necessary technicians to operate the same. The physician under the contract agrees to supervise the operation of the equipment by the technicians and in some cases operates the equipment himself. He also agrees to give his opinion as to the condition of the patient based upon the x-ray films taken of each patient's body. The patient may be an in-patient whose attending physician has requested consultation with the radiologist by requesting x-ray examinations, or a patient who comes to the hospital with or without the advice of another physician for the sole purpose of securing an x-ray diagnosis. The hospital holds itself out as maintaining a radiology department with the physician in charge thereof being available for conference and to assist in determining proper treatment for the condition found to exist.

"(b) A physician who specializes in clinical pathology, which consists of the diagnosis of disease and injury by the use of clinical laboratory methods, such as the examination of tissue, blood, urine, or other body fluids and secretions, has entered into a contract with an Iowa non-profit corporation operating a general hospital. The corporation maintains a clinical pathology laboratory with the necessary equipment and employs the necessary technicians to operate the same. The physician under the contract agrees to supervise the operation of the equipment by the technicians, and in some cases operates the equipment himself. He agrees to give an opinion on the condition of the patient based upon the results of the laboratory procedures when requested to do so. The patient may be an in-patient whose attending physician has requested consultation with the pathologist in charge by requesting laboratory procedures, or a patient who comes to the hospital with or without advice of another physician for the sole purpose of securing clinical pathology diagnosis involving blood, tissue, urine, or other clinical laboratory procedures. The hospital corporation holds itself out as maintaining the clinical pathology laboratory with the physician in charge thereof being available for a conference and to assist in determining the proper treatment for the condition found to exist.

"In each of the foregoing situations, and in accordance with the terms of the contract the hospital, in its own name, bills and collects a fee from the patient for all services rendered and for the use of its equipment and personnel in connection therewith. In accordance with the terms of the contract, the hospital, with no knowledge on the part of the patient, pays the physician for his services a fixed percentage of the gross or net income of the radiology department or clinical pathology laboratory as the case may be. A hospital service association provides as benefits to its subscribers x-ray services and clinical laboratory services. In case of such patients, the hospital bills are paid by the association and under the terms of the contract they are treated as part of the gross or net income in arriving at the compensation to be paid the physician in charge.

"(c) In other hospitals radiologists and pathologists are employed on straight salary contracts with the hospital collecting all of the fees direct from the patient or from the hospital service association.

"Inasmuch as we are charged with the responsibility of aiding in the administration and enforcement of the provisions of law relating to those licensed to practice medicine and surgery in Iowa, your opinion is requested on the following questions:

"1. Is the corporation which operates the hospital in each of the foregoing situations practicing medicine and surgery in violation of the law?

"2. Is the physician in charge of the radiology department or pathology laboratory guilty of unprofessional conduct as that term is defined by the provisions of Subsection 4 of Section 147.56, Code 1950?"

Prior to answering either of your specific questions it is necessary to first determine whether or not the physicians in the situations you inquire about are themselves "engaged in the practice" of medicine and surgery. In this connection we must consider the provisions of Section 148.1, Code 1950, which are as follows:

"For the purpose of this title the following classes of persons shall be deemed to be engaged in the practice of medicine and surgery:

"1. Persons who publicly profess to be physicians or surgeons or who publicly profess to assume the duties incident to the practice of medicine or surgery.

"2. Persons who prescribe, or prescribe and furnish medicine for human ailments or treat the same by surgery.

"3. Persons who act as representatives of any person in doing any of the things mentioned in this section."

In your statement of facts you say that the physician in charge of the radiology department agrees in his contract with the hospital to give his opinion as to the condition of the patient based upon the x-ray film taken of each patient's body, and that the physician in charge of the clinical pathology laboratory in his contract with the hospital agrees to give an opinion on the condition of the patient based upon the results of the laboratory procedures when requested to do so. You further state, in both situations the hospital holds itself out as maintaining either a radiology department or pathology laboratory with the physician in charge thereof being available for conference and to assist in determining proper treatment for the condition found to exist.

In the case of *State v. Hughey*, 208 Iowa 842, 226 N.W. 371, the defendant was prosecuted under the charge of practicing medicine without a license. His argument was that inasmuch as he gave no medicine, he could not be guilty of practicing medicine. At page 846 of the Iowa Reports the Supreme Court stated:

"The term 'practice of medicine' is defined by Section 2538. It is not confined to the administering of drugs. Under this statute, one who publicly professes to be a physician and induces others to seek his aid as such is practicing medicine. Nor is it requisite that he shall profess in terms to be a physician. It is enough, under the statute, if he publicly professes to assume the duties incident to the practice of medicine. What are 'duties incident to the practice of medicine?' Manifestly, the first duty of a physician to his patient is to diagnose his ailment. Manifestly, also, a duty follows to prescribe proper treatment therefor. If, therefore, one publicly professes to be able to diagnose human ailments, and to prescribe proper treatment therefor, then he is engaged in the practice of medicine, within the definition of Section 2538."

It is our conclusion that when the physicians in charge of the respective departments inquired about do give their opinions as to the condition of the patient based upon x-ray or laboratory procedures, they are "diagnosing human ailments," and when they make themselves available for conference or assist in determining proper treatment for the condition found to

exist, they are "engaged" in the practice of medicine and surgery. For additional authority, see 41 Am. Jur., "Physicians and Surgeons," page 151, Section 24; *State vs. Howard*, 216 Iowa 545, 245 N.W. 871; and *State ex rel Bierring vs. Robinson*, 236 Iowa 752, 19 N.W. 2d 214.

We now come to your first question which is whether the corporation which operates the hospital in each of the foregoing situations is practicing medicine and surgery in violation of the law. Section 147.2 Code 1950, provides:

"No person shall engage in the practice of medicine and surgery, chiropractic, osteopathy and surgery, chiropractic, nursing, dentistry, dental hygiene, optometry, pharmacy, cosmetology, barbering, or embalming as defined in the following chapters of this title, unless he shall have obtained from the state department of health a license for that purpose."

and Section 147.93. Code 1950, further provides:

"The opening of an office or place of business for the practice of any profession for which a license is required by this title, the announcing to the public in any way the intention to practice any such profession, the use of any professional degree or designation, or of any sign, card, circular, device, or advertisement, as a practitioner of any such profession, or as a person skilled in the same, shall be prima facie evidence of engaging in the practice of such profession."

Immediately the question is presented whether a corporation would fall within the term "person" as used in the foregoing Section 147.2. The rule as stated in 13 Am. Jur., "Corporations," page 838, Section 837, is as follows:

"While a corporation is in some sense a person and for many purposes is so considered, yet, as regards the learned professions which can only be practised by persons who have received a license to do so after an examination as to their knowledge of the subject, it is recognized that a corporation cannot be licensed to practice such a profession. For example, there is no judicial dissent from the proposition that a corporation cannot lawfully engage in the practice of law.

"A corporation cannot be licensed to carry on the practice of medicine. Nor, as a general rule, can it engage in the practice of medicine, surgery, or dentistry through licensed employees. It is generally held that in the absence of express statutory authority, a corporation may not engage in the practice of optometry either directly or indirectly through the employment of duly registered optometrists."

That the Iowa Court is in accord with the foregoing rule is evidenced by the decision in the case of *State vs. Bailey Dental Company*, 211 Iowa 781, 234 N.W. 260, which was an action in equity to enjoin the defendant corporation from practicing dentistry. Defendant's first contention was that it was not practicing dentistry. At page 784 of the Iowa Reports, our Court stated:

"Defendant's first contention is that it is not practicing dentistry. Immediately upon its incorporation, it did open an office in the city of Des Moines, and equipped the same for the purpose of practicing dentistry. Pursuant to the same purpose, it employed licensed dentists for its work. This course of procedure has been followed ever since. It has advertised the practice of dentistry under its corporate name, and not otherwise. It has obeyed the statute in posting the names of its employee-dentists. No officer of the corporation is a licensed dentist. The ownership and control of the entire equipment is in the corporation and its officers, and not in the employees. Its unlicensed officials necessarily determine all its policies, whether they be deemed professional or commercial. If such officials were to carry on this business as individuals, without the formality of a corporate organization and without a license, would they be amenable to the statutes above quoted, as violators thereof? The affirmative on this question seems too plain to tolerate argument. If these officials could not, as individuals, conduct this business without a license, we can conceive of no reason why they should be permitted to do so, under the statute, under a corporate organization and name. If a business thus conducted by an individual, be unlawful, it is likewise unlawful if conducted by a corporation. Code Section 8339. We hold, therefore, that the defendant-corporation was practicing dentistry, and was doing so, therefore, in violation of the statute."

Following the decision in the *Bailey Dental* case this Department was asked to issue an opinion as to whether medical clinics incorporated and practicing

medicine as an organization would be in conflict with that decision of the Supreme Court. In that opinion appearing 1932 A.G.O., page 248, we stated:

"In view of the fact that the employees of an incorporated clinic would be under the supervision and direction of the officers of the corporation, they would not be free agents and the public would be left unprotected if unlicensed persons and corporations were permitted to practice through and under the cloak of the licensed individual, and this would open the road for quacks, charlatans and others whose greed would be masked under the practice of one of the healing arts, and who, through liberal promises and compensation, would and could employ licensed practitioners who would be obliged to submerge their own ideas and teachings at the request of the unlicensed quacks and corporations by whom they were employed. There would soon spring up throughout the country corporations which would be controlled by laymen who would go out and secure the professional services of unethical licensed men in the different professions, and who would, through cut rates, extravagant advertisements, and the use of cappers and steerers, soon develop a large following, not only to the disadvantage of the different professions, but to the danger of the public.

"When a licensed practitioner of any of the professions attempts to contract his professional services to an individual, or a group of individuals, he is in reality attempting to serve two masters, his employer and his patient. The law has repeatedly, not only in this state but in other states, stepped in and laid down the rule that this practice was against public policy, for the reason that the law takes into consideration human frailties and also recognizes the fact that in many instances, at least, the employee will serve that master from whom he receives the highest remuneration, and that as a result the patients and the public would suffer if any conflict existed between them and the employer. For that reason and the impossibility on the part of clinics and corporations to meet the required standards laid down by the legislature of this state, corporations and clinics would be violating the law if, and when, they employed medical men in their professional capacity to treat the public and held themselves out for that purpose."

An official opinion of this Department in 1934 A.G.O. page 64, held that the Amana Society of Amana, Iowa, could not legally operate physicians' and dentists' offices as a part of their corporate business. Later and as evidenced by an official opinion, 1946 A.G.O., page 159, it was held that the practice of cosmetology by a corporation would not be a legal business and therefore the Secretary of State was advised not to accept such Articles of Incorporation for filing. For additional authority that a corporation cannot legally engage in the practice of one of the healing art professions, see *State vs. Baker*, 212 Iowa 571, 235 N.W. 313; *State vs. Kindy Optical Company*, 216 Iowa 1157, 248 N.W. 332.

In view of the above expressions of the law, we are bound to conclude that a corporation, whether or not organized or operated for profit, may not practice medicine and surgery in this state directly because of its inability as a legal entity to obtain a license, nor can it practice indirectly by hiring licensed members of that profession to do the actual professional work involved. It is immaterial whether the compensation to the licensed person so hired be on a straight salary basis or in the form of a contractual percentage arrangement as you mention in your statement of facts.

We do not intend to say that the mere ownership and operation of a radiology department or pathology laboratory by a corporation in and of itself means that they are engaged in the practice of medicine. Consideration must be given to the hospital for the use of its equipment and facilities, but in our opinion this can only be done through a lease arrangement with a licensed member of the medical profession resulting in a true landlord-tenant relationship with freedom of complete independent judgment and operation as the licensed member deems best. Such an arrangement would permit the physician in charge of the department to be directly responsible to the patient and make possible the paying of the fee for professional services direct to that physician. Under such an arrangement the hospital could not legally hold itself out to the

public as a corporation offering the professional services. This, of course, is very important in view of the provisions of Section 147.93 quoted above with respect to what constitutes prima facie evidence of engaging in the practice of the medical profession. Clearly the type of arrangement just discussed is not apparent under the provisions of the contracts mentioned in your statement of facts.

Your second question makes reference to Code Sections 147.55 and 147.56, Code 1950, and inquires as to the possibility of the provisions of such a percentage contract or salary arrangement constituting "unprofessional conduct" within the meaning of Subsection 4 of Section 147.56, Code 1950, which refers to division of fees in the following language:

"Division of fees or agreeing to split or divide the fees received for professional services with any person for bringing or referring a patient or assisting in the care or treatment of a patient without the consent of said patient or his legal representative."

There can be no doubt that in the case where a corporation hires the licensed member of the profession on a straight salary contract and they receive any amount as compensation for professional services rendered, the one receiving the salary would be guilty of "unprofessional conduct" within the purview of the foregoing subsection. It would be equally clear that under the type of contract where the compensation is determined by a percentage of either the gross or net earnings of the department there would likewise be guilt on the part of the licensed member of the profession of dividing fees with the corporation if any amount was received by them as compensation for professional services rendered. See opinion 1934 A.G.O., page 732, wherein this department held that a division of money received from the sale of prescriptions by a licensed pharmacist with a licensed physician constitutes "unprofessional conduct" within the meaning of the foregoing statute.

Very truly yours,

s/Leo A. Hoegh
LEO A. HOEGH,
Attorney General of
Iowa.
s/Clarence A. Kading,
CLARENCE A. KADING,
First Assistant Attorney
General.

CAMP FOR DIABETIC CHILDREN

A summer camp for diabetic children will be open for its sixth season from July 18 to August 8, 1954, at Holiday Home, Lake Geneva, Wisconsin. In addition to the regular personnel of the camp, there will be resident physicians and dieticians trained in the care of diabetic children.

Boys and girls, ages 8 through 14, are eligible. For further information, interested persons should write or phone the office of the Chicago Diabetes Association, 5 South Wabash Avenue, Chicago 3. Andover 3-1861.

GASTROENTEROLOGICAL MEETING

A meeting of the Central Region of the National Gastroenterological Association will be held at the

Schroeder Hotel, in Milwaukee, Wisconsin, Sunday afternoon, March 28, 1954. The scientific sessions will take place at 2:00 p.m., following the semi-annual meeting of the Association's National Council.

All physicians are cordially invited to attend. Copies of the program can be obtained from Dr. Joseph Shaiken, 536 West Wisconsin Avenue, Milwaukee 3.

POSTGRADUATE ASSEMBLY AT NEBRASKA U.

The second annual Postgraduate Assembly and Poynter Foundation Lecture will be held at the Nebraska University College of Medicine, Omaha, on March 29, 30 and 31, 1954.

The program is as follows: Monday, March 29—"Advances in Pediatric Allergy," Dr. Donald Nilsen, University of Nebraska; "Diagnosis and Management of Rheumatic Fever in the Childhood Period," Dr. Arild Hansen, University of Texas; "Electroencephalography as an Aid in the Evaluation of Convulsion Disorders in Infants and Children," Robert Ellingson, Ph.D., University of Nebraska; "Psychological and Social Problems of Convulsive Disorders in Infants and Children," Dr. Reynold Jensen, University of Minnesota; "Advances in the Field of Infant Nutrition," Dr. Hansen; "General Practitioner's Role in Handling the Handicapped Child," Dr. Jensen.

Tuesday, March 30—"Management of Acute Injuries in the Chest," Dr. John L. Mayer, Jr., Kansas City; "Excisional Therapy for Management of Pulmonary Tuberculosis," Dr. F. John Lewis, University of Minnesota; "Pulmonary Complications Related to Anesthesia," Dr. John L. Barmore, University of Nebraska; "Rational Antibiotic Therapy," Dr. Harry Dowling, University of Illinois; "Treatment of Urinary Infections," Dr. Henry Kammandel, University of Nebraska; "The Use of the Small Chest Film in Tuberculosis Surveys," Dr. Ralph Moore, University of Nebraska; "Recent Advances in Infectious Diseases," Round Table.

Wednesday, March 31—"Iron Metabolism During Pregnancy," Dr. T. C. Holly, University of Minnesota; "Role of Edema in Functional Pelvic Pain," Dr. Gerald Miller, Kansas City; "Selective Treatment of Diabetes Mellitus According to Severity," Dr. Arthur R. Colwell, Northwestern University; "Care of the Patient With Chronic Nephritis," Dr. Arthur Greene, University of Nebraska; "Leukemia in the Older Age Group," Dr. Peyton T. Pratt, University of Nebraska; "Treatment of Arthritis in the Older Age Group," Dr. Eugene E. Simmons, University of Nebraska; "Problems in the Management of the Geriatric Patient," Round Table.

Dr. Reuben G. Gustavson, President of Resources of the Future and former Chancellor of the University of Nebraska, will deliver the Poynter Lecture at the Alumni Dinner on March 30 at the Fontenelle Hotel.

COUNTY SOCIETIES

MEETINGS

Black Hawk

At the January 19 meeting of the Black Hawk County Medical Society, Dr. R. B. Carney, Associate Professor of Dermatology at S.U.I., spoke on "The X Factor in Dermatology," and at the February 16 meeting, Dr. Sidney E. Ziffren, Associate Professor of Surgery at S.U.I., spoke on "Surgical Practice in the Handling of the Aged."

Cass

Dr. L. L. Long, of Atlantic, is the new President of the Cass County Medical Society, Dr. Dwain E. Wilcox, of Atlantic, is Vice-President, and Dr. Einer Juel, of Atlantic, is Secretary-Treasurer.

Cerro Gordo

Approval of the Atomic Energy Commission for an isotope laboratory has been received by the Cerro Gordo County Medical Society. Earnings from a blood bank will finance operation, and management is to be vested in a committee of county physicians.

Dubuque

The meeting of the Dubuque County Medical Society was held on January 12, and a program on "Newer Concepts in the Treatment of Tuberculosis" was presented by Dr. J. C. Painter, of Sunnycrest Sanitarium.

Hardin

Dr. Douglas Bradshaw, Fort Dodge pediatrician, addressed the January 12 meeting of the Hardin County Medical Society. Officers for 1954 selected at the meeting are: Dr. John Sear, of Alden, President; Dr. D. M. Nyquist, of Eldora, Vice-President; and Dr. F. N. Cole, of Iowa Falls, Secretary-Treasurer. It was decided to lend the sum of \$1,500 to the Educational Fund of the Iowa State Medical Society.

Harrison

At a meeting held on January 1, the Harrison County Medical Society elected Dr. Hans Hansen, of Logan, President; Dr. F. X. Tamisiea, of Missouri Valley, Secretary; and Dr. A. C. Bergstrom, of Missouri Valley, Delegate to the annual meeting of the Iowa State Medical Society.

Jackson

Dr. F. J. Swift, Jr., of Maquoketa, was chosen President, Dr. E. V. Andrew, of Maquoketa, Vice-President, and Dr. L. B. Williams, of Maquoketa, Secretary-Treasurer and Delegate to the annual meeting of the Iowa State Medical Society.

Johnson

At the February 3 meeting of the Johnson County Medical Society, Dr. Edward C. Mason, of the Department of Surgery at S.U.I., spoke on carcinoma of the stomach.

Page

Dr. Herman M. Jahr, Professor of Pediatrics at the University of Nebraska School of Medicine, was principal speaker at the Page County Medical Society's meeting at Clarinda, on January 21. Members of the Woman's Auxiliary were guests.

Polk

Dr. C. Elliott Bell, of Decatur, Illinois, coordinator of a public-opinion poll conducted by the Macon County (Illinois) Society, spoke to the Polk County group on "How We Look to the Public" at a meeting in the Hotel Savery, at Des Moines, on January 20. Dr. E. Parish Lovejoy was installed as 1954 President of the Society. Dr. Dwight C. Wirtz is President-Elect; Dr. Thomas A. Bond is Secretary-Treasurer; Dr. F. C. Coleman is Trustee; and Dr. Ralph A. Dörner is Councilor at Large.

Pottawattamie

Dr. John Schenken, a pathologist on the faculty of the Nebraska University College of Medicine, addressed the January 18 meeting of the Pottawattamie County Medical Society on "Thrombocytopenic Purpura." New officers of the Society are Dr. Gordon Best, President; Dr. W. O. Griffith, President-Elect; Dr. Arthur M. Pedersen, Vice President; and Dr. I. J. Hanssmann, Secretary-Treasurer.

Scott

Dr. Willard E. Allen, of the Washington University School of Medicine, in St. Louis, addressed the February 2 meeting of the Scott County Medical Society on the subject "Functional Uterine Bleeding."

DEATHS

Dr. Ernest Leslie Kaufman, 85, a Fort Atkinson physician for nearly 50 years, died at his home on January 14, after a four-months illness. He was a Life Member of the Iowa State Medical Society.

Dr. Matthew Taylor Morton, 63, of Estherville, died at Holy Family Hospital there, on January 29, of cerebral hemorrhage. Dr. Morton had held many offices in the Emmet County Medical Society, and until September, 1953, when ill health forced his resignation he was Third District Councilor of the Iowa State Medical Society.

Dr. Eugene Daley Wiley, 48, of Sioux City, suffered a heart attack and died suddenly on February 3.

Dr. Emil F. Mueller, 73, physician at Dyersville for the past 48 years, died on January 22 at Sacred Heart Sanitarium, Milwaukee, Wisconsin, where he had gone for a two-weeks rest.

Dr. John Stewart Deering, 61, who practiced medicine at Onawa for 32 years, died on January 24 at Phoenix, Arizona, where he had been living since 1952.

Dr. Charles Clement Fowler, 85, pioneer Lovilia physician, died at the Bishop Drumm Home, in Des Moines, on January 28. He retired several years ago after practicing for about 60 years.

Dr. George William Yavorsky, 70, who had practiced at Belle Plaine for more than 48 years, died at Mercy Hospital, Cedar Rapids, on January 7, a week to the day after he announced his retirement. Several years previously he had had a lung removed, but was able to return to practice.

Dr. Peder J. Bursheim, 73, a physician since 1905, died at Iowa Lutheran Hospital, Des Moines, on January 17, of a heart ailment. He had been ill for about ten days. He practiced at Exira before moving to Des Moines 11 years ago.

Dr. Josiah Milton Chittum, 86, physician at North Liberty for 36 years and a Life Member of the Iowa State Medical Society, died at Mercy Hospital, Iowa City, on January 29. He had practiced until the time he entered the hospital, earlier in January.

Dr. Prince Edwin Sawyer, 80, a Life Member of the Iowa State Medical Society, died on January 17, 1954.

HOMEMAKERS FOR CHRONIC CASES

In several localities in America, an extra pair of hands in the home during an illness-crisis is given by a new and growing group of women who bear the simple but appropriate name "homemakers." A pilot project, initiated in 1951, is being conducted by the Essex County, New Jersey, Service for the Chronically Ill, under the auspices of the Essex County Medical Society. In a neighboring area of eastern Union County, New Jersey, a similar program has been sponsored and organized by the Woman's Auxiliary to the county medical society.

Candidate homemakers are giving an orientation course which includes instruction and training in budget-menu planning, marketing, preparation of special diets, tray arrangement, operation and care of electrical household aids, preparation of meals, performance of household chores, and ethical principles involved in serving as a homemaker. Homemakers are paid \$1.25 an hour plus transportation, a fee which is secured by "Chr-ill Service" (as the Essex Service now is known) primarily from the patients themselves, but in some instances from interested health and welfare agencies such as women's clubs and Junior Leagues. Each candidate is carefully screened before being accepted for training and placement. She must have semi-annual chest x-rays and blood tests, and must submit written weekly reports on each patient, including data on hours, salary, carfare, special requests from the patient or his family, etc. Homemakers are identified by light blue uniforms with the emblem of the Chr-ill Service, which they purchase and maintain themselves.

During the first two years of the project, the Homemakers gave 7,897 hours of service to 59 patients, and the demand for their assistance is growing rapidly. During 1953, over 10,000 hours of service were given by 32 Homemakers. Last year, 52 per cent of referrals came from physicians. Fifty-five per cent of the patients had heart or circulatory-system illnesses; 27 per cent had cancer; and there were others suffering from arthritis, diabetes, senility, blindness, epilepsy, alcoholism and other diseases. In January, 1954, it was decided to extend the service to short-term cases and to develop a new branch to be known as the "Preventive Homemaker Service." Homemakers would give care in the following sorts of cases: post-partum, post-operative, and "uncomplicated" medical cases. These latter would include arrested cases of tuberculosis and patients recently discharged from hospitals, but not active cases awaiting admittance.

There now are 99 agencies in the country which have or have had some form of Homemaker Service, scattered through 29 states and the District of Columbia. Packets of material on the subject can be had from the Children's Bureau, U. S. Department of Health, Education and Welfare, Washington 25, D. C.

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Comprising the reports published in the literature to date which give specific facts and figures of the results of treatment

AUTHORS	No. of Patients	Chronic, Resistant to Other Therapy	TYPES OF ULCERS				RELIEF OF SYMPTOMS (Chiefly Pain)				Surgery or Complications ⁵	Side Effects Requiring Discontinuance of Drug ⁶	EVIDENCE OF HEALING			
			Duodenal	Jejunal	Stomal	Gastric	Good	Fair	Poor	No Report			Complete	Moderate	None	No Report
Grimson, Lyons, Reeves	100	100	93	7			80	11	4		5		47		19	29
Friedman	15	15	14			1	5		4	6 ¹			2			13
Bechgaard, Nielsen, Bang, Gruelund, Tobiasen	26	26	21			5	16	4	6				8	6	12	
McHardy, Browne, Edwards, Marek, Ward	162		162				136	12	11		3	1	14	9	7	129
Segal, Friedman, Watson	34	34	34 ⁴				14	13			7	2	5		8	14
Brown, Collins	117	99	117				97	7	8		5	8	55	9	8	40
Asher	77		65		7	5	52	9	16			16			21	47
Rodriguez de la Vega, Reyes Diaz	5	4	5				4		1					3	2	
Winkelstein	116	116	102	8		6	102		14				53		18	45
Hall, Hornisher, Weeks	18	18	18				11		1	6 ²			18			
Maier, Meili	38	38	24			14 ⁴	27	7	4 ¹				10	2	5	21
Meyer, Jarman	25	18	25				21		4							25
Poth, Fromm	37	37	37				33	3	1				33	3	1	
Plummer, Burke, Williams	41	41	41				36		5				38		3	
McDonough, O'Neil	104	100	104				63	10	31			11	4		11	89
Broders	60	60	58		1	1	35	19	6				10	1	49 ⁸	
Legerton, Texter, Ruffin	11		11				11									11
Holoubek, Holoubek, Langford	76	69	76				35	27	10		4	10	26		10	36
Ogborn	42		39	2		1	42 ⁹									42
Shaiken	48	48	48				33	10	3		2		33	10	3	
Johnston	145	145	145				143		2			2	143		2	
Rossett, Knox, Stephenson	146		141			5	146					4 ¹⁰	53			93
TOTALS	1443	968	1380	17	8	38	1142	131	12	26	54	552	52	179	634	
PERCENTAGES			67.8	1.2	0.6	2.6	81.3	9.4	0.8	1.8	3.7	70.5	6.6	22.9		

1. Not included in tabulations.

2. Included in "Relief of Symptoms" as "Poor" and in "Evidence of Healing" as "None."

3. Four had no symptoms when Banthine therapy was begun.

4. Of which seven were penetrative lesions and five partially obstructive.

5. No symptoms were present in four.

6. Two with symptoms only; no demonstrable ulcer.

7. Three were psychopathic patients and one had a ventricular ulcer of the lesser curvature.

8. Roentgen findings after treatment period of two weeks; forty-seven had duodenal deformity.

9. All returned to work within a week.

10. In these four, after relief of symptoms, Banthine was discontinued because of urinary retention.

During the past three years, more than 250 references to Banthine therapy in peptic ulcer and other parasympathotonic conditions have appeared in medical literature. Of these reports, 22 have presented specific facts and figures on the results of treatment in a total of 1,443 peptic ulcer patients, 67.8 per cent of whom were reported as chronic or resistant to other therapy. These results are tabulated above and show:

"Good" relief of symptoms was obtained in 81.3 per cent of the 1,405 patients on whom reports were available.

"Complete" evidence of healing was obtained in 70.5 per cent of the 783 patients on whom reports were available.

In all but 9.3 per cent, relief of pain was "good" or "fair." In all but 22.9 per cent, evidence of healing was "complete" or "moderate."

During treatment, 26 patients required surgery or developed complications other than ulcer which required discontinuance of the drug before results could be evaluated.

Of the remaining 1,417 patients, only 3.7 per cent experienced side effects sufficiently annoying to require discontinuance of the drug.



*Volume containing complete references, with abstracts of 39 additional reports, will be furnished on request by

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Fractures & Traumatic Surgery, Two Weeks, starting June 7
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The Month in Washington

Washington, D. C.—Some parts of the Eisenhower administration's broad health program are making good progress on Capitol Hill, while others are virtually standing still or bogged down in the technical complications that are always a threat to new legislation. Well ahead of the other proposals, and possibly destined for enactment, are bills to broaden the scope of the Hill-Burton hospital construction law and to liberalize income tax deductions for medical expenses.

The House Interstate and Foreign Commerce Committee, under chairmanship of Rep. Charles Wolverton (R., N.J.), wound up its long fact-finding study of voluntary health insurance plans and immediately started hearings on the Hill-Burton changes. The purpose is to amend the Hill-Burton law so that it can be used to disburse federal grants to states for construction of health facilities that do not qualify as "hospitals." The administration is anxious to stimulate the building of more nursing homes, hospitals for the chronically ill, diagnostic or treatment centers and rehabilitation facilities.

An initial appropriation of \$2 million would be authorized for surveys and planning, and \$60 million annually for three years of construction. Per capita income as well as population would be used to determine a state's share, as under the present Hill-Burton program.

At the House hearing, crowded into two days, the construction program was endorsed, at least in principle, by every witness except the representative of the American Association of Nursing Homes. Because the program is limited to non-profit sponsors, members of this group could not receive grants. The private nursing homes' spokesman said long-term loans through the Small Business Administration would help solve their problem.

American Medical Association recommended passage of the bill, but urged that facilities for the chronically ill and the handicapped be "part of or near a conventional hospital," and that facilities of all types be open to the entire community without discrimination, as in the present Hill-Burton law. (It is likely hearings also will be held on this legislation in the Senate.)

The House Ways and Means Committee, meanwhile, was giving its approval to a new income tax provision that would allow the deduction of medical expenses if they exceed 3 per cent of adjusted gross income, rather than 5 per cent under present law. The present maximum limitation would be doubled, and the deduction of travel expenses allowed, where travel is prescribed by a physician. These changes—a long-time AMA goal—are embodied in the omnibus tax readjustment bill.

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President Eisenhower's proposal for federal re-insurance of voluntary health plans has not been able to follow the steady course on which it first appeared to be embarked. At the House hearings, none of the spokesmen for the large organizations in the health fields—AMA, Blue Cross and Shield, American Hospital Association—was willing to endorse the plan. Like the AMA spokesmen, most of them wanted first to examine the actual administration bill, which at that time had not been introduced. From the Blue Cross, however, came a suggestion that the idea be tried out experimentally.

Spokesmen for national labor organizations expressed mixed reactions, with some maintaining that reinsurance was a poor substitute for what they believe the country really needs—national compulsory health insurance.

The administration's health budget for the next fiscal year, starting next July 1, calls for a slight overall reduction. The regular Hill-Burton program, currently operating on \$65 million, would get \$50 million. (Any appropriation to start the proposed expanded construction would be in addition). Relatively sharp reductions would be made in funds for venereal, tuberculosis and communicable disease control, in line with the policy of shifting this responsibility to the states. The various research institutes would receive about what they are now spending.

One of the few new items is for \$7.8 million, estimated as necessary for the extra cost of enlarging the federal program of vocational rehabilitation. Legislation authorizing the expansion is awaiting Congressional action. The administration hopes gradually to increase the number of persons rehabilitated annually from the current 60,000 to 200,000. While the program is being stepped up, one of its goals would be to induce states to increase their spending until eventually their appropriations would match the federal. Like most of the other parts of the President's health program, the rehabilitation effort has the support of the AMA.

Conferences between AMA officials and administration leaders are continuing. Latest sessions were with Secretary Hobby, concerning her department's legislative plans; with VA Administrator H. V. Higley, on treatment of non-service connected cases; and with Adm. Arthur W. Radford, chairman of the Joint Chiefs of Staff, Dr. Frank Berry, Assistant Defense Secretary for health and medical matters, and Dr. Howard A. Rusk, chairman of the Health Resources Advisory Committee, on medical care for military dependents. Representing the AMA at one or more of the meetings were Drs. Walter B. Martin, David B. Allman, Gunnar Gundersen, Louis Orr, James C. Sargent, W. L. Crawford, George F. Lull, Ernest B. Howard and Frank E. Wilson.

Earlier, AMA representatives talked over legislation with President Eisenhower at the White House.

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ST. LOUIS CLINICAL MEETING, DEC. 1-4



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Laboratory Fees in Hospital	5.00	10.00	15.00	20.00
Operating Room in Hospital	10.00	20.00	30.00	40.00
Anesthetic in Hospital	10.00	20.00	30.00	40.00
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PERSONALS

Dr. Emil M. Stimac, formerly associated with Dr. C. M. Zukerman, has opened an office for individual general practice in the First National Bank Building at Davenport.

Dr. John H. Ahrens, who has practiced surgery at New Hampton since 1949, is now a member of the Rohlf Memorial Clinic staff, at Waverly.

Dr. Lois Eichelberry, a graduate of the S.U.I. Medical School who interned at Mercy Hospital, Iowa City, has announced her intention to locate at West Branch on June 1. She will succeed **Dr. T. T. Bozek**, who discontinued practice there on February 1.

Dr. Denes Farago, of Spirit Lake, a native of Hungary who came to this country as a Displaced Person three years ago and has been working at Marcus Snyder Memorial Hospital under the supervision of **Dr. Don Rodawig** and **Dr. Phil Scott**, has been notified he will now be licensed to practice in Iowa.

Dr. Higdon B. Elkins, Associate Professor of Radiology at S.U.I., has been elected to a fellowship in the American College of Radiology.

Dr. V. G. Helt, a graduate of the S.U.I. College of Medicine now interning at Sioux City, will locate at Merville on June 1.

Dr. Ralph Gorrell, of Clarion, accepted an invitation extended by the Pan American Society of General Practice to address its February meeting at Medellin, Colombia.

A new addition to the staff of Holy Family Hospital, at Estherville, is **Dr. Russell L. Cox**, a radiologist who moved there from Creighton Memorial St. Joseph's Hospital, Omaha. He is a graduate of Creighton University Medical School.

Dr. Allen M. Cochrane has announced his intention of locating permanently at Perry and has bought a home there. He has been practicing at Perry on a part-time basis since **Dr. A. J. Mullmann** was injured in an automobile accident last December, and the two men will be associated as soon as Dr. Mullmann is able to resume work.

Dr. Joe Gottsch, of Shenandoah, a lieutenant, has been transferred from San Antonio, Texas, to the Northeast Air Command, the headquarters of which are in New Jersey.

As of February 1, **Dr. W. S. Binford**, of Davenport, retired from the practice of medicine to which he has devoted 54 years. He is a 1900 graduate of the College of Medicine at S.U.I., and practiced 30 years in Dixon before moving to Davenport.

On Sunday, January 31, a few days after his 80th birthday, **Dr. Charles W. Burt** was honored at an open house at his home. After receiving his M.D. at the University of Illinois, in 1901, Dr. Burt began the practice of medicine in West Des Moines, where he has remained ever since. He has been mayor of the town, a member and president of its school board, and, in 1946, recipient of the Citizenship Award of its Chamber of Commerce.

After a year's absence, during which he underwent surgery that was necessitated by injuries and engaged in advanced study at the University of Michigan, **Dr. Abraham G. Fleischman** has resumed his practice of urology in the Equitable Building at Des Moines.

Dr. G. C. Scanlan, who for two years has been an instructor at the Creighton University Medical School, in Omaha, resumed his general practice in DeWitt on January 20. Dr. Scanlan had turned to the less physically demanding work of teaching while in the process of regaining his health.

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PHYSICIAN DISTRIBUTION VERY GOOD

A seven-year study has disclosed that the distribution of physicians in the United States in relation to the people they serve is extraordinarily good.

The first of its kind, the study was conducted by Frank G. Dickinson, Ph.D., Chicago, director of the American Medical Association's Bureau of Medical Economic Research. Dr. Dickinson, who used 1950, a population census year, as the basis for the study, made his report on February 8, 1954 at the 50th annual Congress on Medical Education and Licensure.

To make this study, Dr. Dickinson divided the country into 757 areas, using the trading area principle which is based on road systems and marketing habits of people, not on state, county and city boundaries.

In the 757 areas, Dr. Dickinson found there were 15,192 towns, villages and cities with one or more physicians; 5,311 of these towns, villages and cities were served by one active practicing physician. The number of persons in each area per active practitioner varied from 5,100 in the area around Monticello, Utah, to 380 in the Rochester, Minn., area.

Dr. Dickinson included in the category of active private practitioners only those physicians engaged in general practice or part-time or full-time specialization. Not included in the category were those physicians in the government or armed services, interns and residents, those retired or not in practice, and those in industry, teaching, research or administrative work.

Seventy-five of the 757 areas had more than 2,000 persons per active physician. However, Dr. Dickinson explained, these areas were among the most sparsely populated ones in the nation, located in the mountain, west-north-central, and east-south-central regions of the country. The addition or redistribution of only 361 physicians into these areas would have alleviated this condition, he added.

Dr. Dickinson pointed out that while one-sixth of the land area of the United States was outside a 25-mile radius of the closest town with a physician in active practice, only one-sixth of one per cent of the nation's population lived in this territory. With today's transportation, the physician is able to reach more patients in less time than his predecessor. A patient who is 30 miles away from his doctor today is actually closer in terms of time than most patients four miles away 50 years ago.

According to the report, in 1950 every city, town or village with more than 5,000 population had at least one physician in active private practice, as had 96 per cent of those with a population between 2,500 and 5,000, 88.3 per cent of those with a population between 1,000 and 2,500, and 21 per cent of those with a population between 100



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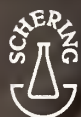
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and 1,000. More than half of the latter group had less than 250 inhabitants, it was added.

Dr. Dickinson's report stated that the recent, rapid rate of medical progress has been aided by better food, housing, sanitation, etc. It was Dr. Dickinson's opinion that, from the standpoint of public welfare, the greatest current shortages of highly trained personnel occur in the fields of physics, chemistry and teaching.

The survey touched on the subject of physicians in the armed services during World War II. At that time, 40 per cent of the country's physicians were in the armed services, leaving 60 per cent to care for the 91 per cent of the population who remained civilian. During this time, civilians economized on the use of civilian physicians, he stated, and most indices of health indicated improvement during the national emergency—a situation which would probably repeat itself in any future national emergencies, he added.

The report is entitled "The Distribution of Physicians by Medical Service Areas."

PLASTIC DRESSING ENDORSED

Successful use of Aeroplast (trade mark), a sprayable, transparent, film-forming polyvinyl plastic dressing for burns and surgical wounds, is described in the current issue of *ARCHIVES OF SURGERY*. Originally an emergency, initial local dressing for mass treatment of thermal burns, it also meets the essentials of a good surgical dressing, according to Dr. Daniel S. J. Choy, Dayton, Ohio. Aeroplast can be removed in one piece, and preliminary studies have shown that it causes no systemic or local toxicity or sensitization, he reported.

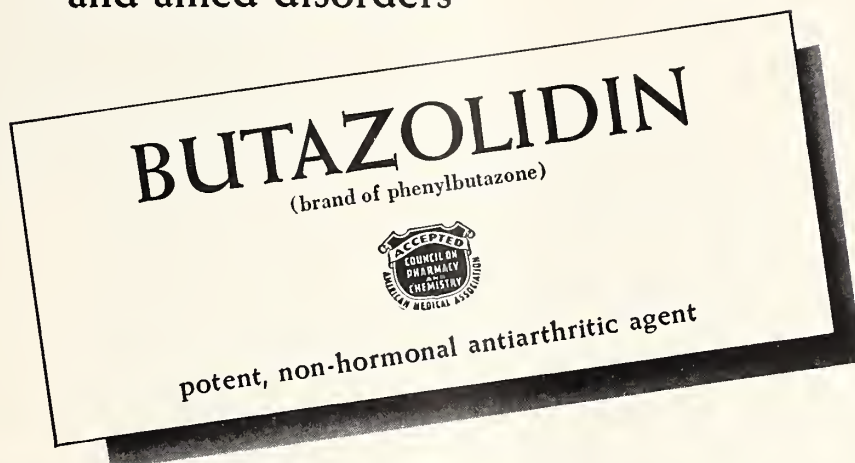
Advantages of the new dressing in burns cases include: marked saving of time in application; applicability to areas otherwise hard to dress; transparency; and flexibility, allowing relatively unrestricted early exercise of burned hands and digits.

The chief drawback of the Aeroplast proved to be the 30- to 45-second period of sharp stinging felt by the patient when the dressing was applied to a raw area. But the stinging sensation is no worse than the burning caused by standard antiseptics, Dr. Choy believes.

He based his conclusions on 50 patients whom he treated with Aeroplast, 11 of whom had first to third degree burns, 8 of whom had skin-graft donor sites which were regarded as second degree burn equivalents, and 31 of whom had other types of surgical lesions such as operative wounds and lacerations of the hands, neck, face and scalp. The plastic was sprayed or painted directly onto the lesion.

Because of the feasibility of its use by relatively untrained personnel, Aeroplast may prove highly useful in military and civilian rescue operations following atomic attack.

in arthritis
and allied disorders



Its therapeutic effectiveness substantiated by more than fifty published reports, BUTAZOLIDIN has recently received the Seal of Acceptance of the Council on Pharmacy and Chemistry of the American Medical Association.

In the treatment of arthritis BUTAZOLIDIN produces prompt relief of pain. In many instances relief of pain is accompanied by diminution of swelling, resolution of inflammation and increased freedom and range of motion of the affected joints.

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Ackerman, J. H., Clarksville
(Atlanta, Georgia)Sr. Asst. Surgeon, U.S.P.H.S.
Arnold, K. E., Sioux City
(Port Hueneme, Calif.) Lt. (j.g.), U.S.N.R.
Bartholomew, R. D., Lake City
(Walnut Creek, Calif.)Lt. (j.g.), U.S.N.R.
Benton, J. S., Des Moines.....1st Lt., A.U.S.
Bogle, W. C., Marion
(Great Lakes, Ill.)Lt., U.S.N.R.
Braatelen, N. T., Des Moines
(Rock Island, Ill.) 1st Lt., U.S.A.F.
Brennan, J. E., Des Moines
(Camp Pendleton, Calif.)Lt., U.S.N.R.
Broman, J. A., Maquoketa
(Ft. Sill, Okla.) Capt., A.U.S.
Buzan, E. F., Des Moines
(Yuma, Arizona)
Christensen, J. R., Eagle Grove
(Palo Alto, California)Lt. A.U.S.
Cline, H. L., Iowa City
(Denver, Colorado) A.U.S.
Couchman, P. G., Des Moines
(Ft. Riley, Kansas)1st Lt., U.S.A.F.
Daut, R. V., Davenport
(Westover Field, Massachusetts)Capt., U.S.A.F.
Davidson, M. C., Emmetsburg
(El Paso, Tex.)Col., A.U.S.
Dooley, J. E., Fort Dodge
(Pleasanton, Calif.)Capt., U.S.A.F.
Dunseth, W. R., Kellogg
(APO San Francisco, Calif.)USAF
Eckhardt, R. D., Iowa City
(Portsmouth, Virginia) Lt., U.S.N.R.

Ehmke, Bruce C., Iowa City
(Hot Springs, Arkansas)1st Lt., A.U.S.
Field, C. A., Cresco
(DeRidder, Louisiana)Capt., A.U.S.
Garred, J. L., Whiting
(San Francisco, Calif.)Lt., U.S.N.R.
Garred, W. P., Dow City
(San Francisco, Calif.)Lt. (j.g.), U.S.N.R.
Giles, Francis E., Cresco
(Fort Bragg, North Carolina)A.U.S.
Godbey, M. E., Mt. Pleasant
(A.P.O. 862, New York City)Capt. U.S.A.F.
Gottsch, John E., Shenandoah
(MacDill A.F.B., Tampa, Florida)Capt. U.S.A.F.
Gottsch, Joseph C., Shenandoah
(Randolph A.F.B., Texas)1st Lt., U.S.A.F.
Haskell, J. G., Reinbeck
Hickman, D. M., Indianola
(Alexandria, Louisiana) 1st Lt., U.S.A.F.
Isham, R. B., OsageU.S.N.R.
Iwen, G. W., Iowa City
Jenkins, H. F., Ogden
(Randolph A.F.B., Texas)U.S.A.F.
Johnson, A. A., Jr., Council Bluffs
(Fort Worth, Texas)Capt., U.S.A.F.
Johnson, M. H., Iowa City
(APO New York, N. Y.)Capt., A.U.S.
Johnson, W. A., Emmetsburg
(Corona, California)Lt., U.S.N.R.
Judiesch, K. J., Iowa City
(Ft. Sam Houston, Tex.)1st Lt., A.U.S.
Kenney, B. E., Woodbine
(Raleigh, North Carolina)1st Lt., U.S.A.F.
Kruze, R. H., Conrad
(Pearl Harbor, T. H.)Lt., U.S.N.R.
Kuehn, W. G., Clarinda
(A.P.O. San Francisco, Calif.)Lt., U.S.N.R.

(Continued on page xxx)



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Roster of Iowa Physicians

(Continued from page xxviii)

Kuehnle, G. R., Dubuque (Baton Rouge, La.)	
Kurth, R. J., Waterloo (Minneapolis, Minn.)	Capt., U.S.A.F.
Larson, Erling, Jr., Des Moines (Indianapolis, Indiana)	Lt., U.S.N.R.
Lawler, Matthew P., Des Moines (Corona, California)	U.S.N.
Leiter, E. R. K., Des Moines (Bangor, Me.)	Capt., U.S.A.F.
McMahon, A. E., Jr., Des Moines (Omaha, Nebraska)	U.S.N.R.
Martins, J. K., Waterloo (Bayonne, N. J.)	Lt., U.S.N.R.
Maxwell, J. R., Iowa City (Camp Stoneman, California)	1st Lt., A.U.S.
Middleton, W. H., Central City (Bethesda, Maryland)	U.S.N.R.
Montgomery, A. E., Jefferson (Phoenixville, Pa.)	Lt. Col., A.U.S.
Nielsen, G. E., Des Moines (Topeka, Kan.)	1st Lt., U.S.A.F.
Paul, R. E., Des Moines (FPO San Francisco, Calif.)	Lt., U.S.N.R.
Perman, Harvey H., Forest City (Yokasuka, Japan)	U.S.N.
Peterson, L. G., Holstein (Camp Kilmer, N. J.)	A.U.S.
Pfaff, R. A., Dubuque (Camp Pendleton, Calif.)	Lt., U.S.N.R.
Pfeiffer, D. W., McGregor (Ft. Sam Houston, Texas)	A.U.S.
Prendergast, L. J., Iowa City (Oceanside, California)	U.S.N.R.
Province, Wm., Jr., Dubuque (Long Beach, Calif.)	U.S.N.R.
Puntenney, A. W., Boone (Portsmouth, Va.)	Lt., U.S.N.R.
Rhode, M. C., Iowa City (Philadelphia, Pa.)	
Rogers, Edward A., Anamosa (U.S.P.H.S. Hospital, Seattle)	
Saunders, R. J., Colfax (APO San Francisco, Calif.)	1st Lt., U.S.A.F.
Schlichtemeier, E. O., Peterson (FPO San Francisco, Calif.)	Lt., U.S.N.R.
Shaffer, F. J., Iowa City	Col., U.S.A.F.
Shuldberg, Arthur, Des Moines (Gunter AFB, Ala.)	1st Lt., U.S.A.F.
Sinton, D. W., Iowa City (Colorado Springs, Colorado)	A.U.S.
Smith, C. B., Iowa City (Bowling Green, Ky.)	Capt., A.U.S.
Sphonheimer, L. N., Donnellson (Mountain Home AFB, Idaho)	1st Lt., U.S.A.F.
Stivers, T. W., Des Moines (Hutchinson, Kansas)	Lt. (jg) U.S.N.R.
Stutsman, R. E., Washington (Miami, Fla.)	Cmdr., U.S.N.
Sugioka, Kenneth, Iowa City (Long Island, N. Y.)	A.U.S.
Theilen, E. O., Iowa City (Washington, D. C.)	Capt. A.U.S.
Thompson, J. W., Ames (Camp Breckinridge, Kentucky)	Capt., A.U.S.
Thornton, F. E., Des Moines (Portsmouth, Va.)	Lt. Cmdr., U.S.N.R.
Troxel, J. F., Cedar Rapids (APO New York, N. Y.)	1st Lt., A.U.S.
Uchiyama, J. K., Des Moines (Wichita Falls, Texas)	1st Lt., U.S.A.F.
von Lackum, L. S., Oelwein (Great Lakes, Ill.)	Lt., U.S.N.R.
Voorhees, P. H., Ottumwa (Jamaica, N. Y.)	U.S.N.R.
Wall, J. M., Boone (Gunter AFB, Ala.)	1st Lt., U.S.A.F.
Walker, J. R., Waterloo (Bethesda, Maryland)	Lt., U.S.N.R.
Walston, J. H., Graettinger (Lackland A.F.B., Texas)	1st Lt., U.S.A.F.
Westly, J. S., Mason City (F.P.O., New York City)	Lt., U.S.N.R.
*Wilkins, D. S., Iowa City (APO San Francisco, Calif.)	Capt., A.U.S.
Wilson, Robert G., Missouri Valley (San Antonio, Texas)	Flight Surgeon
Witte, H. J., Marathon (San Francisco, Calif.)	Lt. Col., A.U.S.
Young, R. A., Clarion (Ft. Sam Houston, Tex.)	Capt., A.U.S.
Zeilenga, R. H., Orange City (Madison, Wisc.)	1st Lt., U.S.A.F.
Zoekler, Samuel J., Des Moines (7071 A.U.S. Hospital, Ft. Belvoir, Virginia)	Capt., A.U.S.

W.M.A. TO STUDY INDUSTRIAL HEALTH

The World Medical Association, representing 700,000 physicians in 46 national medical societies, announced this week that it plans to establish an International Committee on Occupational Health for the benefit of industrial workers everywhere.

At an initial meeting in New York recently, more than 60 industrial health leaders in the United States explored the feasibility of embarking on such a program and urged the W.M.A. to do so.

"Since the World Medical Association represents non-governmental agencies, its efforts to improve the occupational health of workers and their families will be directed to individual physician members of the World Medical Association," Dr. Louis H. Bauer, secretary-general, said.

Industrial health leaders, representing medicine, industry, and government, pledged support of the new movement at the New York meeting.

Dr. Bauer listed these immediate objectives of the International Committee on Occupational Health after it is appointed:

1. To formulate and promulgate standards for better medical and health services to employed groups.

2. To prepare a report on the relation of the physician to these major components of industrial health: administrative relationships, health counseling and health education, preventive medicine, workmen's compensation, rehabilitation, medical care, and environmental hygiene.

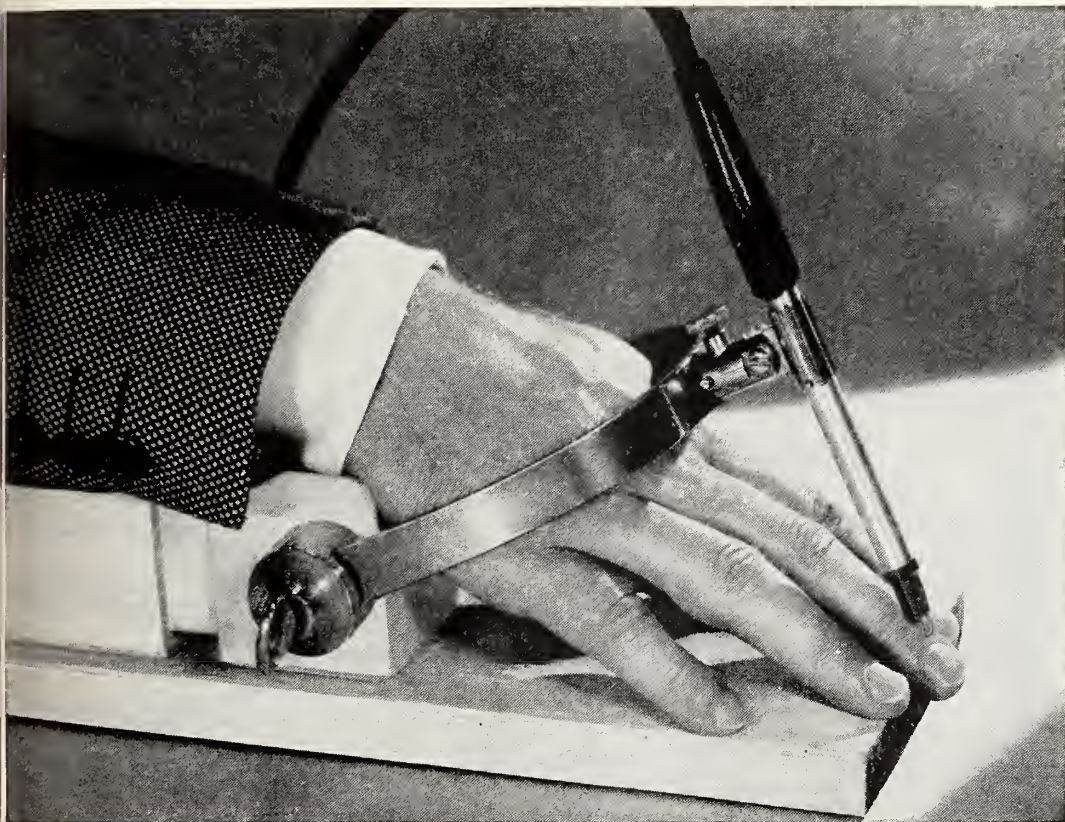
3. To meet with representatives of other international industrial health groups, such as the International Labor Organization and the World Health Organization, to define specific objectives, spheres of action and working relations.

4. To sponsor a discussion at an early session of the World Medical Association, independently or in conjunction with other agencies, to bring into focus its own program with that of existing international bodies.

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ARE REGISTERED TRADEMARKS
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To compare the efficiency of various filters as they affect physiological responses in the cigarette smoker, drop in surface skin temperature at the last phalanx was measured.

Using well-established procedures, the subject smoked conventional filter cigarettes and the new KENT with the exclusive Micronite Filter.

For every other filter cigarette, the drop in temperature averaged over 6 degrees. For KENT's Micronite Filter, there was no appreciable drop.

These findings confirm the results of other scientific measurements that show these facts: 1) KENT's Micronite Filter takes out *far more* nicotine and

tars than any other cigarette, *old or new*. 2) Ordinary cotton, cellulose or crepe paper filters remove a small but ineffective amount of nicotine and tars.

Thus KENT, with the first filter that really works, gives the one smoker out of every three who is susceptible to nicotine and tars the protection he needs . . . while offering the satisfaction he expects of fine tobacco.

For these reasons, smokers have made the new KENT the most popular new brand of cigarette to be introduced in the last 20 years.

If you have yet to try the new KENT with the exclusive Micronite Filter, may we suggest you do so soon?



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Cedar.....	H. E. O'Neal, Tipton.....	O. E. Kruse, Tipton.....	P. M. Hoffman, Tipton.....
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Chickasaw.....	A. L. Murphey, Fredericksburg.....	E. C. O'Connor, New Hampton.....	M. J. McGrane, New Hampton.....
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Hamilton.....	B. F. Howar, Webster City.....	C. A. Heise, Jr., Jewell.....	B. F. Howar, Webster City.....
Hancock-Winnebago.....		M. W. Saffley, Forest City.....	T. J. Irish, Forest City.....
Hardin.....	John Sear, Alden.....	F. N. Cole, Iowa Falls.....	L. F. Parker, Iowa Falls.....
Harrison.....	Hans Hansen, Logan.....	F. X. Tamisiea, Missouri Valley.....	A. C. Bergstrom, Missouri Valley.....
Henry.....	K. P. Beebe, Mt. Pleasant.....	R. B. Widmer, Winfield.....	J. R. Beebe, Mt. Pleasant.....
Howard.....	W. G. Doss, Cresco.....	C. E. Swanger, Cresco.....	P. A. Nierling, Cresco.....
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Keokuk.....			D. L. Grothaus, Delta.....
Kossuth.....	D. L. Bray, Algona.....	J. M. Schutter, Algona.....	M. G. Bourne, Algona.....
Lee.....	G. J. McMillan, Ft. Madison.....	Sebastian Ambery, Keokuk.....	R. E. Cooper, Keokuk.....
Linn.....	R. Y. Netolicky, Cedar Rapids.....	A. F. Harrington, Cedar Rapids.....	R. L. Feightner, Ft. Madison.....
Louisa.....	J. H. Chittum, Wapello.....	K. T. DeYarman, Morning Sun.....	J. H. Chittum, Wapello.....
Lucas.....	Dean Curtis, Chariton.....	R. E. Anderson, Chariton.....	R. E. Anderson, Chariton.....
Lyon.....	H. H. Gessford, George.....	S. H. Cook, Rock Rapids.....	S. H. Cook, Rock Rapids.....
Madison.....	R. W. Carson, Winterset.....	J. E. Evans, Winterset.....	C. B. Hickenlooper, Winterset.....
Mahaska.....			E. B. Wilcox, Oskaloosa.....
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Marshall.....	D. D. Harris, Marshalltown.....	H. E. Sauer, Marshalltown.....	R. C. Carpenter, Marshalltown.....
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Mitchell.....	Wm. E. Owen, St. Ansgar.....	R. H. Huber, Osage.....	T. E. Blong, Stacyville.....
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Monroe.....	R. A. Smith, Albia.....	H. J. Richter, Albia.....	H. J. Richter, Albia.....
Montgomery.....	R. S. Smith, Red Oak.....	G. M. Skallerup, Red Oak.....	E. L. Croxdale, Villisca.....
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O'Brien.....	L. J. Sweeney, Sanborn.....	W. S. Balkema, Sheldon.....	T. D. Kas, Sutherland.....
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Dedication

During the year since the College of Medicine last had the privilege of assisting in the publication of an issue of this JOURNAL, a number of significant events have contributed to the welfare of the College. Among these are the establishment of a Rehabilitation Center with enlarged facilities for care of poliomyelitis patients, the relocating of the department of Pediatrics in improved quarters, additions to the surgical facilities, and appropriation of funds for the beginning of a Research Wing for the school.

However, another event has touched more closely the lives of all of our faculty. This is the coming of our new Dean. In the few months since he assumed his duties, Dean Nelson has made himself a friend to all. He has stimulated us with a fresh outlook and refreshed us by his candor. He has added strength to our purpose and sharpened our concept of our ideals.

Thus, it is with the most fervent of good wishes, that we take the pleasure of dedicating this issue of the JOURNAL to Dr. Norman Bartram Nelson, Dean of the College of Medicine of the State University of Iowa.

Committee for the University Issue



The Curability of Stomach Cancer

EDWARD E. MASON, M.D., Ph.D.*

IOWA CITY

ON JANUARY 29, 1881, Theodore Billroth removed a stomach for cancer from one Theresa Heller.¹ The patient had an uncomplicated convalescence, but succumbed less than four months later from peritoneal growth of residual neoplasm. This was the first success in the surgical removal of a stomach for cancer, and at the same time the first failure of gastric resection in the cure of cancer. During the succeeding years, surgeons acquainted themselves with the techniques of gastric resection, x-ray came into widespread use for diagnosis, and both physicians and the lay public began to think of surgery as a potentially successful means of treating abdominal neoplasms. By 1935 one clinic reported 127 five-year survivals, a salvage of 3 per cent of all patients seen in that study.¹ Recent case reviews reveal five-year survival rates of 12.2 per cent at the University of Minnesota Hospitals, where the average age of such patients is 63,² and 17 per cent at the Mayo Clinic, where the average age of stomach cancer patients is 55.³

What is the curability of gastric cancer? The question is of some importance to mankind, in view of the fact that among malignant diseases stomach cancer still remains one, if not the, chief cause of death. Figures from Great Britain reveal that 14,409 deaths due to stomach cancer were reported during 1952 for an estimated population of 43,940,000.⁴ These figures are in line with the estimate that 40,000 people die of cancer of the stomach each year in the United States.⁵ The magnitude of the problem demands serious thought and action on the part of every physician. To act effectively, it is necessary for one to examine the factors in gastric cancer which determine its curability. What variables influenced cure rates in the period 1881 to 1954? Can any further improvement be made in existing methods of treatment? Is it reasonable to expect higher cure rates if treatment can be instituted early in the course of the disease, or is this an overworked and unproved theory that should be abandoned? These are questions which will be discussed below.

First, what factors influenced the cure rate of gastric cancer during the initial seven decades of man's effort to combat the disease?

The greatest improvement came about through the extension of surgery to ever-increasing numbers of patients. During the early years this was manifest in the records of single institutions (Fig. 1) by increase in operability and resectability.^{2, 6} Less evident, but of even greater importance, is

the fact that patients are now being treated in large numbers of small hospitals near their homes, where well trained surgeons have become available. Around 1940, statistical studies show that there was a significant improvement in the operative mortality rate and that there was a subsequently reflected improvement in the five-year survival rates (Fig. 1).² It was around 1940 that the sulfa drugs came into use, and the decrease in operative mortality was coincident with a decreased incidence of fatal pneumonia and peritonitis. The risk of surgery was thereby reduced. Not only did the number of postoperative deaths decrease, but more extensive surgery could be attempted with an acceptable mortality rate. There is no way of accurately assessing the exact effect of all of the various factors that could conceivably have influenced cure rates. It would even appear from cursory examination of statistical material that no advance has been made in cure rates during the last decade in our teaching hospitals.^{2, 6} However, a walk through the wards of these hospitals reveals that many of the patients now being cared for are rather poor risks by virtue of complicating diseases of the cardiovascular and other systems, and it may therefore be inaccurate to conclude that no improvement has occurred. There may have been a change in the type of patients being referred to teaching hospitals over the years. A change in patient material may have obscured any slight improvement that otherwise might have appeared in reviews conducted in our teaching centers. Such considerations should serve to temper the pessimism of those who blame the apparent lack of improvement on the peculiar biology of these tumors.⁷ Nevertheless, reports on results in stomach cancer treatment are now less frequently published, probably because of the seeming plateau in results. Surgeons have written so much about extending surgery and early diagnosis that some may believe these suggestions have been successfully carried out and have already failed. Close examination of the facts shows that early diagnosis has never been tested to see what improvement can or cannot be made.

The disease, gastric cancer, has been exhaustively studied for only a rather narrow portion of its time sequence. Friesen,⁸ by examining the records of patients who survived partial gastrectomy, but whose specimens showed microscopic spread of tumor to the line of resection, has observed that such patients were asymptomatic for almost two years following their resection. These patients had already passed through a silent interval, had become symptomatic, and were subsequently successfully resected before they were

* Assistant Professor of Surgery, University of Iowa Hospitals, Iowa City. Formerly a Fellow in Surgery and Trainee of the National Cancer Institute at the University of Minnesota.

sufficiently select to enter the study group. Thus, even though the data are provocative, the information obtained really does not tell us anything about the biology of gastric cancer early in its course.

What per cent of lymph nodes are involved and what per cent of blood streams have been invaded by gastric cancer a few months or even a year following the appearance of the first few malignant cells? We do not know. We know only the degree of malignancy, the per cent and the extent of spread in late cases, the majority of which are too late for cure. With such cases, operability has been increased to over 80 per cent and resectability to over 70 per cent.² The percentage of hospitalized patients resected for cure has remained constant at around 40 per cent for at least the last 15 years.² With such cases, Balfour⁹ predicted in 1937 that five-year survival rates following partial gastrectomy for cure would reach a maximum of 30 per cent, with a rate of 48 per cent for negative lymph node cases and 18 per cent for those cases with involved nodes. These are essentially the results today throughout the country. Figure 2 shows a survivorship curve prepared by the

method of Berkson¹⁰ and covering cases successfully resected with intent to cure by partial gastrectomy at the University of Minnesota Hospitals during the period 1936 to 1951, inclusive.² Thirty per cent of patients survived five years. It can be estimated that about 20 per cent of patients in such an age group would succumb during a five-year period in any case. This leaves at least 50 per cent of these patients who, we can assume, died from residual or unremoved neoplasm. Such is the disease as it is now seen late in its course.

How far beyond the surgeon's knife has the disease spread in those cases where surgery fails to cure? Can a wider swath encompass the tumor? Meissner¹² studied resected specimens, using special stains and special care, and was able to find evidence of tumor invasion into blood vessels in 52 per cent of lesions. Tumor seen in a blood vessel does not necessarily mean blood-stream metastases, but the correlation may be high. Lymph node spread is present in over 60 per cent of specimens resected with intent to cure.² If only a few nodes are involved, cures may be obtained, but wherever many nodes are involved, the attempt to cure is almost uniformly unsuccessful.

GASTRIC CANCER (1936-1951)

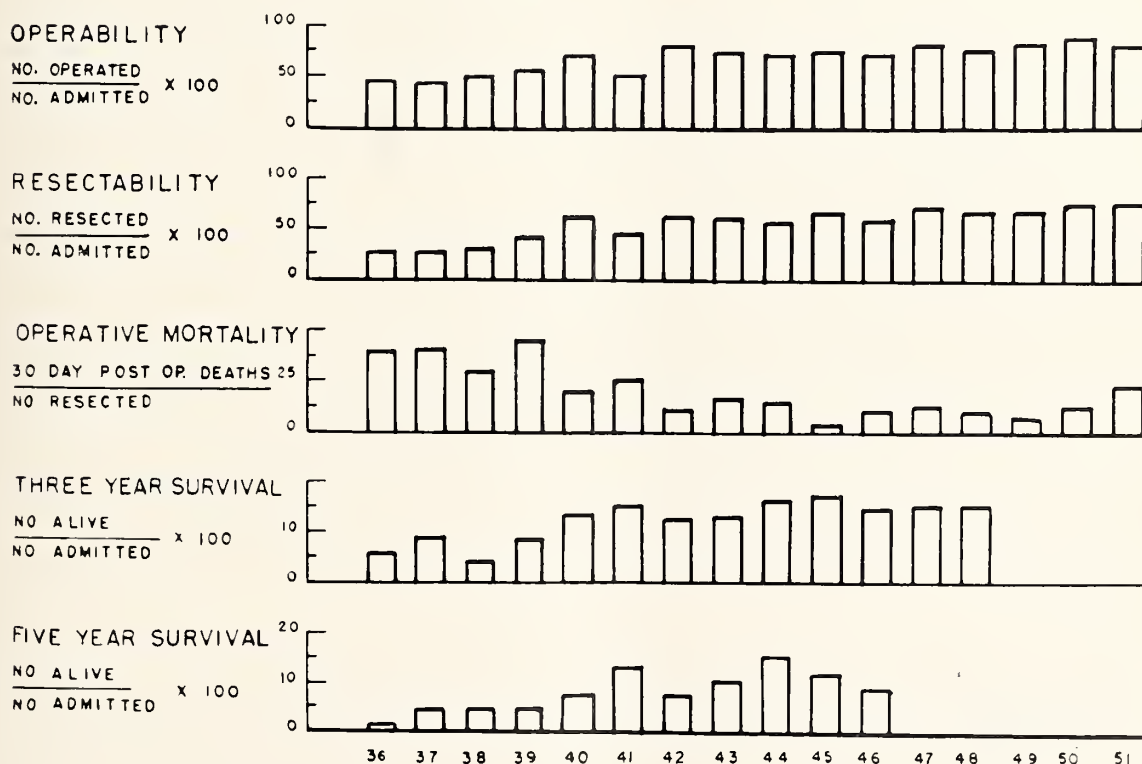


Fig. 1. This shows the early improvement in operability and resectability which was accompanied by an increase in survival rate. Around 1940, operative mortality decreased, and a further improvement in survival rates occurred. Data for this graph came from a study by Mason, Kelley and Barclay.²

ful. These facts do not obviate the necessity for a continued effort to extend and improve surgical excision, but the gains will probably be small in proportion to the risk, effort and resultant morbidity.

Perhaps it is wrong, when discussing gastric cancer with the lay public, to speak so bluntly concerning these commonly known facts as Gray¹² has suggested. At the same time, the medical profession does not deserve to be lulled to sleep by pleasant recountings of improvement when the record is so poor. Berkson *et al*¹³ have done a magnificent job of reviewing the large series of gastric cancers treated at the Mayo Clinic. Although improvement is demonstrated by a comparison of recent results with results from a group of cases seen between 1907 and 1916, their figures do not show improvement for the last decade. Where a span of 30 years is necessary in order to demonstrate a five per cent improvement in cure rate, there is no room for complacency.

Early diagnosis remains as a completely untried solution to the problem of gastric cancer. Macdonald⁷ says, "The concept that early diagnoses

of carcinoma of the stomach may improve end results is not only fallacious, but is in fact, the reverse of the truth. Patients with progressively longer periods of delay, from onset of symptoms to the time of exploration, enjoy increasingly better chances of resection and long-term survival." Macdonald then proceeds to quote widely from statistical studies carried out on late symptomatic cases in order to prove his concept of "biologic predetermination." He presents no data on a control series of truly early cases either from his personal experience or from the experience of others. In conclusion, he repeats that, "Biologic predeterminism, rather than the time or type of surgical treatment, governs end results in gastric cancer." Such pessimistic acceptance of the *status quo* is even more dangerous to the advancement of gastric-cancer cure rates than the creation of a false sense of security over a continuing progress that is not really demonstrable. Unfortunately Macdonald is not alone in this unwarranted attitude of pessimism. Lees and Lees¹⁴ have felt so compelled to expound such views that they have published a book on the subject. It is evident that

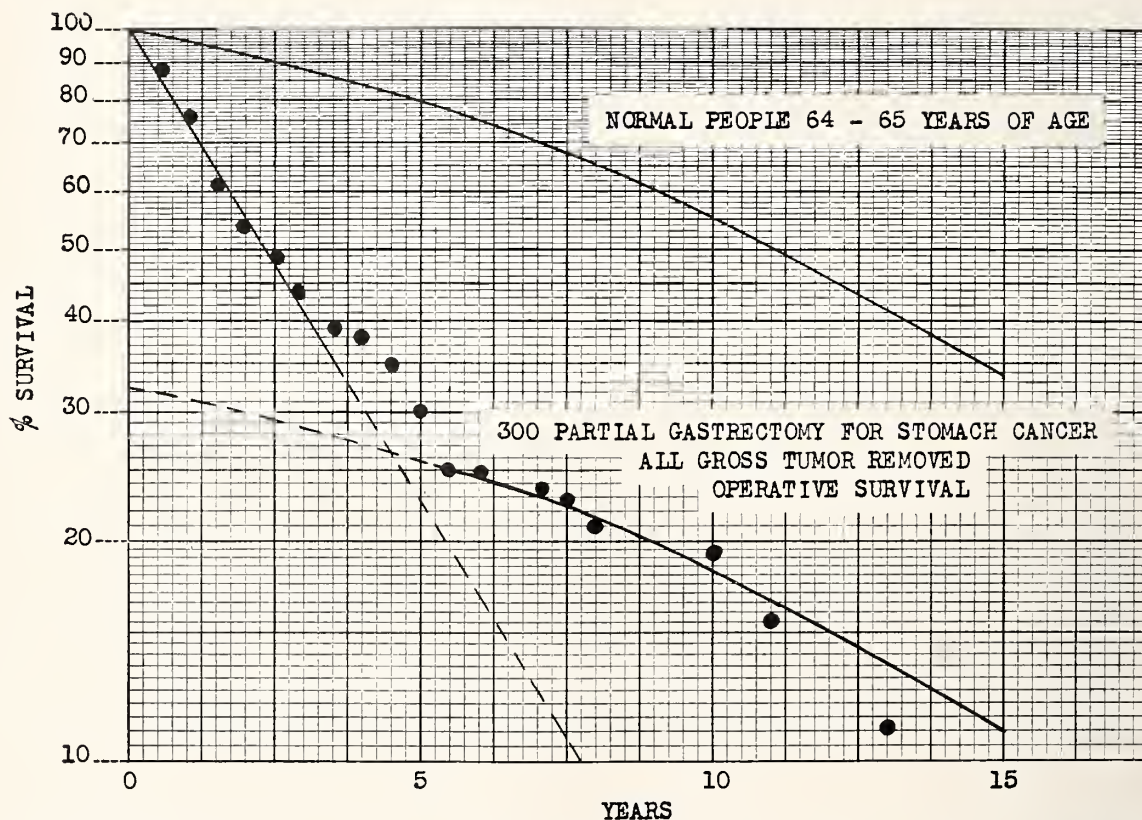


Fig. 2. Survivorship curve prepared after the method of Berkson¹⁰ for 300 patients who survived a partial gastrectomy for cure at the University of Minnesota Hospitals between 1936 and 1951. This is a semilogarithmic plot of per cent of patients surviving, on the ordinate, against years following resection, on the abscissa (dots). A line above shows a similar survivorship curve for normal people of the same age. Notice that the dots follow two curves. Initially they follow a curve representing primarily deaths from cancer. Later survival parallels the death rate for the normal population of the same age. At five years following partial gastrectomy 70 per cent have died, but 20 per cent could have died from causes other than carcinoma. Thirty per cent remain and most of these patients have been cured. This is the cure rate predicted for such patients by Balfour⁹ in 1937.

these men have gone too far in drawing conclusions, and yet their demands for proof of the benefits of early diagnoses cannot go unheeded.

Mason *et al.*² reviewed the symptoms of gastric cancer with regard to delay in diagnoses and observed that there is a median delay in treatment of six months following the onset of symptoms and that the delay has not decreased in recent years. Boyce¹⁴ has similarly observed a failure in effecting a decrease in the symptomatic interval and comments on the frequency of mistaken therapy, inadequate investigation of the cause of symptoms, the lack of diagnostic suspicion on the part of physicians, etc.

There are two facets to the problem of early diagnosis. One is to accomplish an actual decrease in the overall lag time between onset of disease and surgery, and the other is to obtain unequivocal evidence concerning the effect of early diagnosis on the cure rate. The control series of early cases should actually be a series of cases found by screening asymptomatic and unselected members of the general population. With such a group of surgically treated cases, one would expect 100 per cent operability and a considerable improvement over the current 40 per cent of hospitalized cases resected for cure. These cases should then be followed closely for five years and the survival rate corrected for age and compared with existing five-year survival rates. These cases are being found through cancer detection center studies and photofluorographic surveys. Such surveys are invaluable, since they will, for the first time, allow study of the disease from a different vantage point in its time sequence. We have never before had a chance to learn what the growth characteristics of gastric cancer are, except in the late symptomatic period.

Wigh and Swenson¹⁵ screened a large number of asymptomatic individuals over the age of 45 and were able to find 14 cases of gastric neoplasm. Eleven of these individuals submitted to surgery. In this study a photofluorographic-screening technique was used, and it was estimated that the cost of examining a sufficient number of cases to find one case of asymptomatic stomach cancer was \$2,500, a figure which is comparable with the estimated \$3,000 that it costs to discover a case of uterine cancer by currently used mass survey techniques.

During the above survey, for each stomach cancer that was found, three cases of adenoma were discovered. In screening studies carried out in the Minnesota Cancer Detection Center at the University of Minnesota, such cases of adenoma are under special study. Hay¹⁶ has reported that the pernicious anemia patients examined have shown a six per cent incidence of gastric polyps, and achlorhydric patients have shown a three per cent incidence. Carcinoma of the stomach has rarely been found when these polyps are smaller

than 2 cm. in diameter. When the polyps are over 2.5 cm. in diameter, malignancy has been demonstrated in over 50 per cent of cases. Some of these specimens show carcinomatous changes occurring away from the polyp. This is very valuable information, and such studies should be given full support by the medical profession.

Although the asymptomatic cases will be of greatest interest for determining the potentialities of early diagnosis, there is still a challenge in the diagnosis of patients at an earlier stage following the onset of symptoms. Patients should be given every chance for cure, including prompt diagnosis and treatment.

Perhaps sufficient numbers of the medical profession have not as yet been impressed with the insidiousness of the initial symptoms of gastric cancer. The older the patient, the more suspicious we must be. Over the age of 65, gastric cancer is present in one out of every 500 males in the general population.⁵ It is three times as common in males as in females.² No patients over the age of 30 or 40, male or female, should be free of suspicion if they have vague symptoms of upper abdominal discomfort, which was the initial symptom given by over 50 per cent of patients that had proved gastric cancer.² The medical student confronted with this recommendation frequently begins to wonder, first, if he has the symptoms himself and, secondly, if this suspicious attitude won't lead to the impossible task of obtaining a complete x-ray examination of every patient that comes into the physician's office.

Obviously, some judgment must be used. When such patients are not x-rayed, they should be warned that a complete examination has not been done because of the time and expense involved and that if symptoms of indigestion and mild discomfort persist or return, an immediate re-examination with x-rays is imperative. Patients with vague symptoms should not be reassured and treated symptomatically as individuals with functional or psychosomatic problems until a basis for such reassurance has been obtained.

Occasionally, when a physician's suspicion of stomach disease is high and x-rays have failed to demonstrate any abnormality, further examination by gastroscopy and more detailed x-ray examination is indicated.

Stomach cancer may develop in a chronic gastric ulcer or may assume the appearance of a gastric ulcer. Such stomach cancer patients, when studied as a group, seem to have a better prognosis than the larger group of unselected gastric cancer patients. This may well be due to the fact that ulcer cancer patients are symptomatic earlier during the growth of the cancer and reach the operating table earlier in the sequence of their disease. Those who would treat gastric ulcers medically should review the results of a recent five-year followup of 414 cases by Cain *et al.*¹⁷

Only 20 per cent of these medically treated patients were permanently relieved of their symptoms. Thirty-four per cent finally had surgery, and over 10 per cent either had cancer of the stomach or developed it during the five years. Surgeons are inclined to advise surgery for the majority of these gastric ulcer cases even though it is recognized that some benign gastric ulcers can be permanently healed by medical treatment. Any physician who elects to treat such patients without surgery is obligated to follow healing with repeated x-rays and to demonstrate not only complete healing but maintained healing. The initiation of such a non-surgical program should at least require that a gastric analysis be carried out. It is difficult to understand how a patient could be treated medically for "gastric ulcer" in the presence of histamine achlorhydria unless gastric analysis had simply been overlooked.

For many patients with stomach cancer, months or even years may be saved in instituting treatment if physicians maintain a high index of suspicion of vague upper abdominal symptoms, and if gastric ulcer is considered as primarily a surgical disease.

SUMMARY

Factors that have influenced curability during the first seven decades of man's efforts to cure patients of gastric cancer have been reviewed. It appears that a solution to this problem will not be found in any change in operative technique. Early diagnosis remains the single great challenge in reducing the number of gastric cancer deaths. The exact importance of early diagnosis will not be known until a truly early, asymptomatic group of patients has been treated and followed. In the meantime, individual patients should be given the benefit of every effort to achieve early diagnosis

and aggressive treatment. The vagueness of the gastric cancer patient's first symptoms demands special alertness on the part of physicians if a decrease in delay of treatment is to be realized.

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Gamma Globulin Called Useless Against Polio

Gamma globulin inoculations have demonstrated no beneficial effects, a Public Health Service sponsored committee of experts has announced.

The group, after evaluating nationwide data on last summer's inoculations, concludes that: 1. Observation of communities where mass child inoculation was carried out does not provide sufficient evidence to determine the efficacy of the serum in preventing the disease or alleviating its effects. 2. Mass inoculations usually occurred after the epidemic peak, thus reducing evidence of its effect on the epidemic. 3. Family-contact administration of the serum (where all household members were inoculated immediately upon recognition of a polio case) did not appreciably lessen subsequent family incidence of paralytic polio. 4. Inoculation of exposed persons caused no measurable differ-

ence in the severity of ensuing paralysis. 5. More experience and greater opportunity for scientific investigation are necessary for proper evaluation of gamma globulin in mass inoculations. The group, composed primarily of physicians, made its findings public after a three-day session at the PHS Communicable Disease Center in Atlanta, Georgia.

Spokesmen for the Health Resources Advisory Committee of the Office of Defense Mobilization said later that ODM is prepared to continue administering the distribution of the serum for use against polio next summer, provided that a satisfactory plan is agreed upon. In any case, however, the Committee said it could see no reason why it could not be distributed and doctors could be enabled to use it as they see fit.

Congenital Absence of Abdominal Musculature

REPORT OF TWO CASES

D. A. CULP, M.D.

AND

R. H. FLOCKS, M.D.*

IOWA CITY

CONGENITAL ABSENCE of the abdominal muscles is a rare condition. In 1950 Silverman and Haung collected 45 cases from the literature and added three of their own. In October, 1951, Burton reported a case, to bring the total to 449. Two cases now have been observed at the University Hospitals in Iowa City.

In spite of the sparsity of cases, many interesting observations have been made. Forty-six of the patients were males. Only two cases were said to have occurred in females, and in the remainder the sex was not recorded. Most of the patients exhibited extreme deficiency, rather than an absence of muscle fibers, and in each instance the flat muscles of the abdomen were the ones involved.

The genito-urinary system in the majority of these patients also exhibited congenital abnormalities, the most prevalent being bilateral cryptorchidism and bladder-neck obstruction, with dilatation of the upper urinary tract. Less frequently, errors in embryological rotation of the gut, pigeon breast, anterior bulging of the sternum, narrowing of the thorax, flaring of the costal margin, and cardio-vascular abnormalities have been noted. Even in cases where no definite anatomical abnormalities were noted, aside from the absent muscles, there were functional disturbances. Intestinal peristalsis, defecation, and micturition were adversely influenced.

Various theories have been advanced to explain the pathogenesis of these deformities. Do they arise independently in each system from the same or different etiological factors, or do the deformities in one system produce secondary changes in other systems? One group feels that the embryonic error in the development of the abdominal muscles is a primary defect, which secondarily produces deformity in the other systems through a decrease in the intra-abdominal pressure. A second group believes that the primary defect is bladder-neck obstruction, producing a markedly distended bladder with pressure atrophy of the abdominal muscles. However, there are many patients with congenital bladder-neck obstructions in whom the abdominal muscles are

well-developed, and, by the same token, several patients with poor abdominal muscles have not had associated genito-urinary changes.

Disturbances of blood supply, intrauterine poliomyelitis, congenital syphilis, and neurogenic anomalies similar to Hirschsprung's disease have been considered as etiological factors.

In spite of the numerous anomalies in the musculo-skeletal, gastro-intestinal, and cardio-vascular systems, the clinical syndrome presented by these patients is that of bladder-neck obstruction. The symptoms are difficulty in voiding, frequency, nocturia, and oftentimes enuresis. In many instances children are brought to the physician because the parents have been unsuccessful in properly training the child to become continent. Because of the urinary tract obstruction, infection is common and symptoms of recurrent chills, fever, and malaise become part of the clinical picture. Occasionally, the disease process may progress silently until there has been marked renal damage due to pressure atrophy of the renal parenchyma. When this occurs, the symptoms may not be referable to the urinary tract, but most



Fig. 1. (W. R.) General appearance on admission.

* From the Department of Urology, University Hospitals, Iowa City.



Fig. 2. (W. R.) Sodium iodide cystogram showing a markedly distended bladder with bilateral ureteral reflux.

often consist of nausea, vomiting, diarrhea, and failure of proper development suggesting a gastrointestinal pathological process.

In most cases the diagnosis can be established by a complete urological examination, which consists of a careful physical examination, urethral catheterization, renal function studies, intravenous pyelography, delayed cystograms, and cystoscopy with retrograde pyelograms. Palpation of the abdomen reveals a firm, cystic, midline abdominal mass which disappears on the urethral catheterization. Large quantities of residual urine may be found. The blood urea nitrogen, non-protein, and creatinine may be elevated, and there is delayed excretion of the phenolsulfonphthalein by the kidneys. Concentration and dilution renal-function tests reveal a thick specific gravity of the urine. If the renal function tests are within normal limits, an intravenous pyelogram may show bilateral dilatation of the upper urinary tract. In patients with poor renal function, a delayed cystogram will demonstrate decompensation of the bladder, and occasionally ureteral reflux due to destruction of the valve mechanism at the uretero-vesical junction. In many instances, this will be sufficient to demonstrate the degree of damage to the upper urinary tract. If these examinations fail to provide the necessary information, then cystoscopy and retrograde pyelography are indicated. It is of particular interest to note that only the last examination requires the trained skill of the urologist and that in most cases any well-trained physician can establish the diagnosis by the simple procedure previously mentioned.

The prognosis of these patients is poor, mainly because of the associated genito-urinary deformity.

Two cases were reported alive at seventy and sixty years, but neither had bladder neck obstruction. The majority of the cases expire in infancy.

Treatment should consist of support for the abdominal wall, prevention of infection, relief of intestinal obstruction when it occurs, and correction of the genito-urinary deformities that exist. Repairative measures for the large, redundant ureters, vesico-ureteral reflux, and bladder-neck obstruction should be performed as early as possible. In the meantime it may be necessary to relieve the urinary obstruction by nephrostomy or suprapubic cystostomy. The following two cases were seen at the University of Iowa Hospital:

Case 1: W. R., age 2½ years, #46-3059. This patient was admitted with the chief complaint of retention of urine. At birth he was noted to have a large abdomen. Aside from this, he was apparently normal and was in good health until three weeks prior to admission, when he developed a "cold" and was seen by the family physician. In the course of the examination the child was found to have a distended bladder. Three hundred cubic centimeters of residual urine was removed. Following this catheterization, he was unable to void.

The physical examination revealed a thin male 2½ years of age who appeared chronically ill. The head, eyes, ears, and nose were normal. The throat was injected. The thorax was symmetrical and thin-walled, and there were rales in both lung

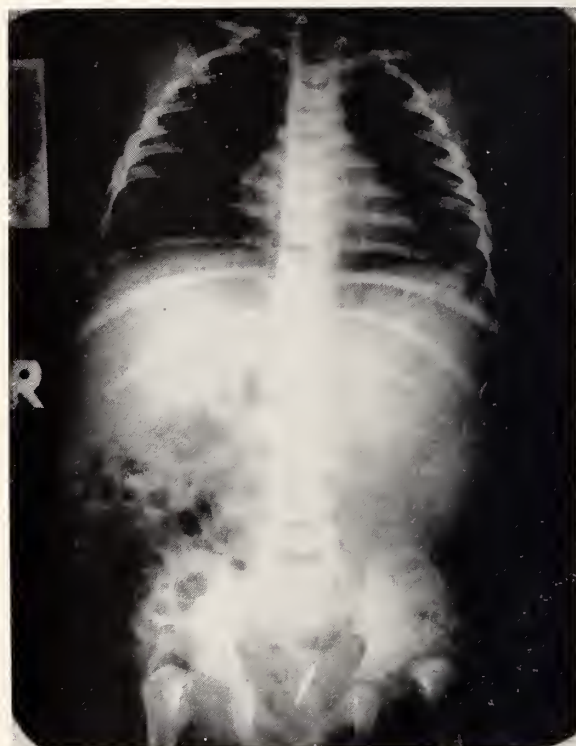


Fig. 3. (W. R.) Flat plate of abdomen revealing a large abdomen and bilateral dislocation of the hips.

bases. The heart was not enlarged, and there were no murmurs. The abdomen was large, flabby, with wrinkled, leathery appearing skin. (Figure 1) The right kidney was large and easily palpable. The remainder of the viscera could be palpated with ease.

Urinalysis was normal, except for 10 to 15 white blood cells per high power field. The hemoglobin was ten grams, the red blood count 4,860,000, and the white blood count 13,200. The blood urea nitrogen was 10.5 mgm. per cent, creatinine 1.0 mgm. per cent, calcium 10.5 mgm. per cent, and phosphorus 4.8 mgm. per cent.

A sodium iodide cystogram revealed a huge bladder, with bilateral ureteral reflux. (Figure 2) Difficulty was encountered in catheterizing the child due to obstruction at the bladder neck, but a filliform and #12 French follower was passed, and the bladder was gradually decompressed. A film of the spine was normal, but revealed bilateral congenitally dislocated hips, with a marked enlargement of the abdomen. (Figure 3)

A resection of a median bar obstruction at the bladder neck was performed. The bladder was markedly trabeculated, and the ureteral orifices dilated. The patient responded well to the treatment, and in a few days the indwelling catheter was removed. The patient voided with a good stream and carried no residual urine. He gained weight in the hospital and was markedly improved on discharge.

Two months later he returned for a follow-up



Fig. 5. (L. C.) Photograph of patient showing marked protrusion of abdomen.



Fig. 4. (W. R.) Intravenous pyelogram revealing normal bilateral functioning kidneys.

examination and showed continued improvement. He had no difficulty urinating, but continued to have nocturia four to five times. The urine was cloudy. There had been no chills or fever. Urinalysis revealed many white blood cells per high power field. The residual urine was 35 cc. Intravenous pyelograms revealed normal, bilateral functioning kidneys. (Figure 4)

The patient has never returned again to the University Hospitals; but, by correspondence, it has been learned that he is still alive at the age of 10 years. He continues to have recurrent urinary-tract infections that require administration of antibiotics.

Case 2: L. C., age 22 years, #51-4093. This patient was admitted to the University Hospitals with the chief complaint of hematuria. He first noted blood in his urine one year prior to admission. This was associated with pain low in the left side of the back. During the two months prior to admission he had frequency, nocturia, involuntary voiding, and enuresis. He drank copious quantities of water and voided in large volumes. In addition, he noted ringing in his ears, throbbing of his heart on climbing stairs, and shortness of breath. Since birth he has had a large, protruding abdomen.

Physical examination revealed a thin, pale young man who fainted during the examination.



Fig. 6. (L. C.) Photograph of patient showing outline of abdominal viscera through thin abdominal wall.

His blood pressure was 140/86, and his pulse was full and strong, with a rate of 80 per minute. The head, eyes, ears, nose and throat were normal. There was flaring of the lower rib cage, and the lungs were clear to percussion and auscultation. There was a systolic murmur at the apex of the heart, but the rate and rhythm were normal. The abdomen was greatly distended, about the size of a seven-month pregnancy. (Figure 5) Masses corresponding to all the abdominal organs were visible and palpable. (Figure 6) There was a prominent venous pattern over the abdominal wall. The bladder was distended above the umbilicus. Rectal examination revealed the prostate to be small and benign. The rectal tone was slightly decreased. Examination of the genitalia revealed a normal, circumcised penis, but the scrotum was empty and the testes were not palpable anywhere along the inguinal canal.

The patient was catheterized, and 500 cc. of bloody urine was removed, but that procedure only partially deflated the suprapubic mass. Gradual decompression required approximately one week to empty the bladder completely.

Urinalysis revealed a specific gravity of 1.008, a reaction of 6.5, two plus albumin, negative sugar, four plus Meyers, and much cellular debris. The hemoglobin was 5 grams, the red blood count 2,200,000, and the white blood count 6,200. The blood urea nitrogen was 127 mgm. per cent, creatinine 6.0 mgm. per cent, a blood calcium 7.7 mgm. per cent, the CO_2 combining power 30 cc., blood chloride 662 mgm. per cent, and the total plasma protein 7.23, with an albumin of 4.32 and a globulin of 2.91. During the decompression, an accurate replacement of the sodium chloride loss in the urine was maintained by intravenous normal saline. During this interval he received five blood transfusions, which gradually raised the hemoglobin and red blood count to 11 grams and 3,110,000, respectively. Gradual improvement was

noted in the blood chemistries after the bladder was decompressed and the drainage instituted.

A sodium iodide cystogram revealed a markedly distended bladder with many cellules, saccules, and diverticula. There was bilateral ureteral reflux. (Figure 7)

A transurethral resection of the bladder-neck obstruction was performed and 21 grams of tissue were removed. The pathological report declared that this tissue was fibromuscular and had come from the bladder neck. The postoperative course was afebrile, and he emptied his bladder well. On the day of discharge he had only 10 cc. of residual urine. A corset was applied for support of the abdominal muscles.

He returned three months later, free of all symptoms. His urine showed a one plus albumin and was loaded with white blood cells. A delayed cystogram showed a large bladder with bilateral ureteral reflux. Gantrisin was administered in an effort to control his urinary-tract infection.

Five months later, shortly after arising one morning, he had a convulsion which lasted thirty minutes and was followed by stupor for one hour. He bit his tongue, salivated, and was incontinent of urine and feces. A second attack occurred four hours later, and he was immediately admitted to the University Hospital in a comatose and convulsive state. In the bladder there was 1000 cc. of residual urine, and the blood urea nitrogen was 175 mgm. per cent and the creatinine 16.0 mgm. per cent. In spite of supportive therapy, he quickly expired.

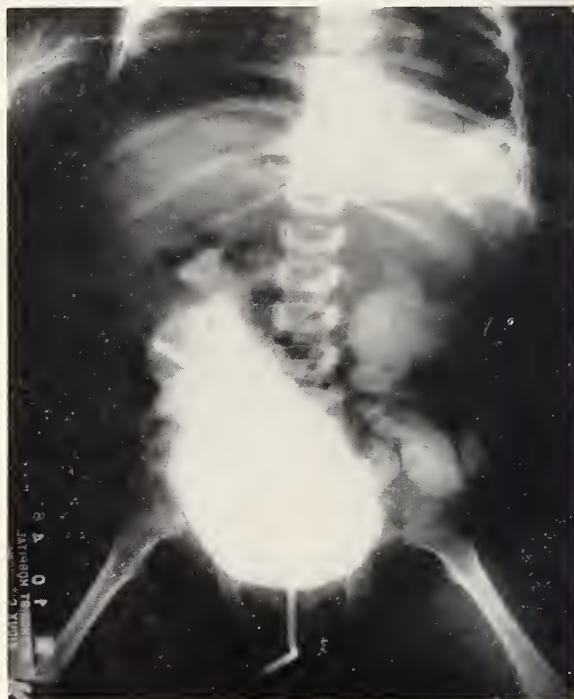


Fig. 7. (L. C.) Sodium iodide cystogram showing a large irregular bladder with bilateral ureteral reflux.



Fig. 8. (L. C.) Photograph of postmortem specimen consisting of kidneys, ureters and bladder.

A postmortem examination revealed congenital aplasia of the abdominal musculature, bilateral undescended testes, congenital persistence of the mesentery of the ascending colon, an abnormally long transverse mesocolon, congenital malrotation of the duodenum, congenital persistence of the left supracardinal vein, a patent foramen ovale, bilateral hydroureters, with mild inflammation and scarring, bilateral hydronephrosis with severe chronic pyelonephritis (Figure 8), chronic cystitis, marked hypertrophy and dilatation of the bladder (Figure 8), pulmonary edema, hypostatic pneumonia, and an adenoma of the rete testes.

A brief summary of the literature concerning absence of the abdominal musculature and addition of two cases has been made. These serve to emphasize the importance of the associated congenital anomalies in this condition, particularly those producing obstruction to the urinary tract.

CORRECTION

In the article "Comparative Radiotherapeutic Results in Carcinoma of the Cervix Uteri as Modified by Prior Surgery and Radiation," published in the October, 1953, issue of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY (43:403-8), the sentence "Carcinoma of the cervix would have been treated by total hysterectomy" should have read "Carcinoma of the cervix would not have been treated by hysterectomy but rather by radiotherapy."

ANNUAL GOLF TOURNAMENT

The annual tournament will be held April 25, 1954 at the Des Moines Golf & Country Club. Golfers will be permitted to tee off as early in the day as they may choose.

In order for the tournament to proceed smoothly, the committee must know in advance the approximate time each foursome will want to begin play. The managers of the Des Moines Golf & Country Club use a starting-time system. Please drop a note to either Dr. H. J. McCoy, 616 Bankers Trust Building, or Dr. Dan Glomset, 1102 Equitable Building, Des Moines, giving the approximate time you plan to reach the first tee. The committee is hopeful that all golfers will have started their rounds by 2:00 p.m.

A buffet dinner is scheduled for Sunday evening, and all scores should be posted prior to that time. Gold prizes will be awarded following the dinner.

POLIO VACCINE

Parke, Davis & Co., the firm which obtained U.S. License No. 1 for the manufacture of biological products, in 1903, is furnishing the first poliomyelitis vaccine for use by the National Foundation for Infantile Paralysis.

It is expected that enough vaccine will be available before April 12 for the inoculation of 370,000 children. More vaccine will be available later, for all of the Parke, Davis production facilities have been placed at the disposal of the Foundation.

NOVOCAIN FOUND VALUABLE IN DEGENERATIVE ARTHRITIS

Twenty-one of 31 patients with arthritic conditions showed "marked and prompt relief from pain" within two weeks after oral treatment with novocain was started, according to Drs. Rubin Klein and Samuel B. Harris of the Arthritis Clinic, Greenpoint Hospital, Brooklyn, New York.

Writing in the NEW YORK STATE JOURNAL OF MEDICINE*, they report having found that the drug helps for a limited time, though it cannot be continued indefinitely because of its toxicity, and though neither it nor anything else that so far has been discovered will either prevent or cure the disease.

Of the 31 patients given novocain orally, there were 23 cases of degenerative arthritis, two of rheumatoid arthritis, one a combination of both, three of fibrositis, one of polyarthritis and one of calcified bursitis. A few were completely relieved in two days; the rest were helped within periods ranging up to two weeks. Their ages ranged from 29 to 87.

* 55:2382, (Dec.) 1953.

PROFESSIONAL MEETINGS

The editors of the JOURNAL will be glad to print announcements of all professional meetings that will be of interest to physicians in a considerable part of Iowa. Data on such meetings must reach the JOURNAL's office no later than the tenth of the preceding month.

The Physiopathology of Arterial Hypertension

JAMES W. CULBERTSON, M.D.*

IOWA CITY

LET ME DIRECT your attention especially to those types of arterial hypertension which are characterized by a persistent elevation of the diastolic pressure level. This will eliminate from our consideration those varieties of high blood pressure which exhibit primarily a systolic elevation, such as that observed in cases of aortic insufficiency or advanced generalized arteriosclerosis. The latter types actually represent special conditions in which the mean arterial pressure may not be above normal, and the diastolic level frequently remains within an average range. Therefore, the arteries are subjected only intermittently to systolic pounding and stretching, and they have a rest period during the diastolic phase of every cardiac cycle. Please consider instead the large group of patients with arterial hypertension in whom both diastolic and mean pressure levels are sustained relentlessly at heights significantly above the normal range. It is in these instances that the entire systemic arterial tree is subjected, without surcease, to the continued and prolonged effects of a stressor force which it is designed to bear only intermittently. The diastolic pressure level is of utmost importance because it represents the minimal degree of strain to which the arterial tree is subjected for weeks and months and years on end.

Initially, diastolic hypertension always is a physiological abnormality, which presumably is reversible. The abnormally high blood pressure is transmitted equally to arterial vessels of all sizes, from aorta to arterioles. The capacity of the arteries to withstand undue stretching without demonstrable organic change may be expected to vary inversely with the average level of diastolic pressure—the lower the diastolic pressure, the longer the arteries can contain it without the advent of structural changes. Conversely, the higher the diastolic pressure level, the sooner organic changes will appear. Thickening of the media of a muscular artery may be regarded as an adaptive process of hypertrophy; but the potential extent of this protective response is limited, and it is followed by the more conspicuous and unfavor-

able stigmata of hyalinization, sclerosis, and atheromatous degeneration.

These marks of vascular degradation tend to be distributed widely, the changes in an artery of any particular size depending somewhat upon the character of its normal structure. Yet certain arteries of a given size and structure are far more vulnerable than their fellows because of their role in conducting blood to the more vital organs. The most notable of these are the coronary and cerebral arteries. Approximately 40 per cent of deaths among hypertensives are due to myocardial decompensation incident to coronary insufficiency or occlusion. Roughly another 40 per cent are attributable to cerebral vascular accidents. These are the two major catastrophes that any proposed treatment for hypertensive arterial disease should aim to prevent. It is of interest that only about 10 per cent of these patients suffer renal failure and die in uremia. The remaining 10 per cent die of a variety of miscellaneous causes.

The physician is handicapped by the presence of irreversible organic abnormalities when he attempts to treat a patient with degenerative arterial disease. Our great problem is to attack these conditions early, while the abnormality still is a physiological one and the process still is a reversible one. In this stage we still are handicapped, it is true, by ignorance of the etiology in most patients with arterial hypertension. Nevertheless, our therapeutic potentialities are limited only by the limitations of our knowledge and not by inexorable alterations in the arteries. We can afford to be hopeful and to reflect this hopefulness to our patients, for the cause or causes of essential hypertension surely will be found one day. Who knows but that a key discovery may be made in the course of the judicious application of one or more of the presently available palliative and symptomatic therapeutic measures?

Although we do not yet know the etiology of arterial hypertension (be it single or multiple), we do know some things about its physiopathology. What is the fundamental demand of the body upon the cardiovascular system? It is the demand for an adequate supply of circulating blood to all tissues, either constantly or intermittently, according to particular local needs. All known homeostatic or homeokinetic factors affecting the cardiovascular system respond to variations in both total and local demands for

* Associate Professor of Internal Medicine and Director of the Cardiovascular Laboratory, College of Medicine, State University of Iowa.

The Cardiovascular Laboratory is supported by the State University of Iowa, the Iowa and American Heart Associations, the Iowa State Department of Health, and the National Heart Institute of the U. S. Public Health Service.

blood. The crucial segment in the circulatory network is the capillary bed, wherever situated. Adequate blood flow through local capillary beds requires the maintenance of a head of pressure in the arterial tree that is sufficient to preserve the arteriovenous gradient, or pressure differential, required to cause blood to flow through the capillaries. The arterioles regulate the rate of flow into the capillary beds, while at the same time protecting the fragile capillary walls from the potentially damaging high level of pressure in the arterial tree. One step farther back in the circuit, the heart must pump into the aorta every minute a volume of blood equivalent to that which is flowing from the arteries into the capillary beds. Hence, a measurement of the minute volume output of the heart serves also as an accurate estimate of the rate of total peripheral blood flow through the capillary beds. This, in turn, is equivalent to the amount of venous blood returning to the right side of the heart at the same time and being pumped through the lungs and back to the left ventricle, to complete the circuit.

Physiologically speaking, hypertensive patients are very much like normotensive individuals in all apparent respects except for the prolonged elevation of the mean arterial pressure (due especially to the persistent elevation of the diastolic level). Normally, several factors contribute to the maintenance of systemic arterial pressure: (1) the pumping action of the heart, (2) the quantity of blood in the systemic arterial tree, (3) the viscosity of the blood, (4) the elasticity of the systemic arterial walls, and (5) the peripheral resistance, which is contributed chiefly by the arterioles, since they are the smallest branches of the arterial tree. One by one, most of these factors have been investigated and shown to be substantially the same in hypertensive patients as in normal persons. The minute volume output of the heart is normal. The total blood volume is normal, although we cannot say that there is no abnormality of distribution between arterial and venous compartments of the systemic vascular network. The blood viscosity is normal. The elasticity of the arterial and arteriolar walls does not appear to be impaired until degenerative changes of actual sclerosis have become established. Therefore, by exclusion, abnormally high peripheral resistance to the outflow of blood from the systemic arteries in patients with essential hypertension has come to be regarded as the effective physiopathological factor in the perpetuation of an abnormally high arterial pressure in the presence of a normal cardiac output. Because of the increased arteriolar resistance, an arterial pressure level above normal is necessary to overcome the higher resistance and to provide an adequate rate of capillary blood flow.

In order to maintain an abnormally high arterial pressure under these circumstances, the heart must do a greater than normal amount of work;

therefore, the left ventricular myocardium must hypertrophy. Thus, by an adaptive response, the heart overcomes the abnormality afflicting the arterioles and maintains normal circulation at the cost of a direct threat to the adequacy of its own blood supply. Ultimately, if the arteriolar spasm is not relieved, the heart may destroy itself in attempting to combat the abnormality.

Peripheral resistance cannot be measured directly, but it can be estimated from values obtained by simultaneous measurement of arterial pressure and blood flow rate, either for the body as a whole or for any special region. Knowing flow rate and pressure level, one calculates resistance from a ratio by applying Poisseuille's law, which states that flow varies *directly* with pressure and *inversely* with resistance. This relationship may be written to solve for whichever variable one wishes,

$$\text{as } F = \frac{P}{R}, \text{ or } P = FR, \text{ or } R = \frac{P}{F}. \text{ It can be seen}$$

from these formulae that if a means could be found to bring the peripheral resistance down to normal, there would be two possible effects: (1) if the pressure remained elevated, blood flow would increase; or (2) if the blood flow—being adequate—remained the same, arterial pressure would fall to its normal level. This last relationship is the rational basis for efforts, by whatever means, to bring down a high arterial pressure by decreasing the peripheral resistance due to excessively constricted arterioles.

I shall merely mention in passing the long standing controversy as to whether this unhealthy arteriolar constriction has a neurogenic or a humoral causation. Perhaps in some types of arterial hypertension there is one, and in other types the other. I suspect that more often than not both factors are present in a single case. It does seem pertinent to state that all studies so far have indicated that the increased arteriolar resistance is generalized in nature, appearing to involve arterioles everywhere in the body. Yet it is a fact that the arterioles of the kidney tend to exhibit a peculiarly severe degree of vasoconstriction and to produce a strikingly abnormal renal physiological pattern.

There is a temptation to speculate that therapy of a general nature might be more fruitful than one involving a localized attack. Yet this notion obviously would be wrong if a local attack could rid the body of a focus of origin of a humoral substance with a generalized action. Undoubtedly, what we need most acutely is a genuine clue to the basic cause or causes of arterial diastolic hypertension. Such a clue could lead to an understanding of etiology. With a knowledge of actual causation one then could proceed to plan a truly rational treatment. Meanwhile, we must continue to do the best that we can empirically with the increasingly effective therapeutic agents currently

at our disposal, using them singly or, preferably, in suitable combinations. Each year brings new, pertinent and exciting information that is useful in treating this challenging disorder which especially plagues civilized, overnourished man. The time is ripe for a solution of the fundamental riddle, anywhere and at any time.

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The Uses and Abuses of Carbon Dioxide

STUART C. CULLEN, M.D.*

IOWA CITY

BECAUSE THE FACTORS that determine carbon dioxide levels and govern the influence which carbon dioxide exerts in the dynamics of the human body are fully presented in numerous standard texts on physiology, there seems to be little necessity for a recounting of that material in such a paper as this. Indeed one can assume that anesthetists and others who tamper with the normal physiologic state or those who work with patients whose physiology is unbalanced are thoroughly familiar with the current concepts of oxygen and carbon dioxide transport, the properties of those gases and the influence they have upon physiologic mechanisms.

Since there is uniform agreement in those areas, it might seem that a discussion of the use of carbon dioxide in anesthetic practice could terminate at this point and everyone might return to his work. But differences of opinion arise from differences in the *interpretation* of this fundamental knowledge. The ensuing discussion will be developed to take into account the various points of view governing the application of carbon dioxide in the clinical practice of anesthesia.

TROUBLE FREQUENTLY UNRECOGNIZED

It is to be expected that some people will approach a discussion of this topic with somewhat less than a completely scientific attitude. They are the ones who have used carbon dioxide in a physiologically unsound manner without encountering any major difficulty, or have not recognized dangerously abnormal situations when they arose. Some of their long-standing practices are, by chance, sound ones, and survive justifiably. Others, they have perpetuated out of respect for dogmatic tutors. And still others—and these con-

stitute a regrettably large portion—they perpetuate because of indolence and a lack of desire to analyze the effects of the practices critically. This group is represented by those who say, "I have used carbon dioxide in this way for years and never have had any trouble."

With a thorough understanding of the physiology involving carbon dioxide, there can be little deviation from a rational application of carbon dioxide in anesthetic practice. And in the use of carbon dioxide, as well as other gases and drugs, scientific method can be employed in the evaluation of the effects of the gas. There are several logical steps.

For example, in the scientific use of carbon dioxide in anesthetic practice, one first determines by review of available literature on the topic what is known about the gas. After this information has been obtained, he develops a hypothesis about the manner in which the gas may be employed and what effects may be expected. After this step, he uses the gas in the manner projected in the hypothesis and makes critical and controlled observations. Then, when he has made the observations he studies them to determine whether the hypothesis is correct or incorrect. If the hypothesis is incorrect, he must develop a new approach in the light of the observations made. If the hypothesis is somewhere nearly correct, he may continue to use it only if he continues his critical observations and revises his method in the light of new findings.

DOUBTFUL VALUE DURING INDUCTION

There is considerable controversy over the use of carbon dioxide in high concentrations during induction of inhalation anesthesia. Those who use the method are as emphatic about its advantages as those who do not use it are emphatic about its disadvantages. Scientific method could be em-

*From the Division of Anesthesiology, Department of Surgery, College of Medicine of the State University of Iowa, Iowa City.

ployed to settle the issue. In step number one, a thorough acquaintance with the known facts about carbon dioxide reveals that carbon dioxide is an important element in the control of respiration. Under normal conditions there is strict regulation within close limits of its concentration in alveoli and blood stream. Variations from the normal ranges of carbon dioxide tension evoke profound influence on respiration, circulation, electrolyte balance, etc. After this information and much else is obtained, step #2 includes the administration of carbon dioxide to a number of patients in known concentrations during a specific period of time in the induction. An equal number of other patients are induced in the same fashion with the same drugs, technic, anesthetist, etc., without the use of carbon dioxide. Observations would be made in an impartial manner on such things as the blood pressure, pulse rate, rate and volume of respiration, amount of perspiration, speed of induction, evenness of the ensuing anesthesia, recovery period, susceptibility to shock, and a host of other related factors.

After this information has been obtained, it should be analyzed according to recognized methods of statistical analysis and appropriate deductions made. It is emphasized that these deductions would be subject to continued reevaluation as experience was expanded. One might then have some idea of the worthiness of the use of carbon dioxide in the induction of anesthesia by inhalation under the circumstances of the experiment.

There is no justification for supporting the use of carbon dioxide during the induction of inhalation anesthesia if the experience with the method does not include controlled observations of the type mentioned. It matters little and it is not convincing to state that 10,000 or more other patients probably have been induced with inhalation anesthesia without carbon dioxide with equally good results. Furthermore, there needs to be a clear statement of what is meant by "trouble." Some people refuse to acknowledge that deviations from normal physiologic states constitute "trouble," whereas by others, they are interpreted as serious "trouble."

From a knowledge of the physiology of carbon dioxide, there is reasonable expectation that its use in excess can cause unnecessary and serious physiologic derangement. There is evidence to indicate that high concentrations of the gas elevate the blood pressure, produce convulsions, enhance the anesthetic state and, by increasing the minute volume exchange, result in the rapid development of dangerously high blood levels of anesthetic agent. The hypothesis that these effects result in higher anesthetic morbidity and mortality needs to be tested. However, the physiologically-minded anesthetist, in view of the evidence just mentioned, is disinclined to use carbon dioxide during induction.

MISUSE AS A STIMULANT

Carbon dioxide is often employed to "stimulate" respiration in the patient depressed with an anesthetic agent or a non-volatile drug. This application of the gas is based upon the utilization of an isolated segment of the total information about carbon dioxide. Carbon dioxide in slightly increased concentration in the unmedicated patient is capable of significantly increasing the minute volume exchange. But in higher concentrations, and particularly in the depressed patient, carbon dioxide is a depressant to the respiration.

The hypothesis that carbon dioxide is a desirable gas to use in patients with respiration depressed by anesthetic drugs needs also to be tested under controlled conditions (and the term *desirable* needs to be defined). But it can be expected from available and well established data that there is no advantage to using carbon dioxide in this circumstance. Furthermore, it is a potentially dangerous practice. Patients with inefficient respiration as a result of depression from anesthetic drugs are in that state because of misapplication of the drugs. Respiratory function is diminished because the respiratory centers are subjected to the effects of the drugs and probably to associated hypoxia. Elevated carbon dioxide tension in the respired atmosphere often will result in increased ventilation, but optimal concentrations may not be reached. Furthermore, patients with inadequate ventilation have retention of carbon dioxide, and the blood level of the gas is already elevated above normal. The logical course to pursue is to eliminate the depressant drug and its effect upon the respiratory control centers and to provide oxygen to the depressed cells. With elimination of the depressant drug and the restoration of an adequate supply of oxygen, respiration will return to normal, and the abnormal carbon dioxide tension will be reduced.

Reasonably well controlled clinical and laboratory investigations indicate that if the depressant is eliminated and oxygen supplied, carbon dioxide has no beneficial effect in the treatment of depressed respiration and often exhibits undesirable effects such as accentuated depression and convulsions. It is important to remember that the anesthetized patient is depressed because of too much anesthetic and not because he has too little carbon dioxide. Adding carbon dioxide in this situation can be expected to compound the felony and not correct the underlying disturbance of function.

DANGERS OF CO₂ RETENTION

It may be assumed erroneously that in this discussion reference to addition of carbon dioxide to the respired atmosphere implied only the use of cylinders of 100 per cent gas or mixtures of carbon dioxide and oxygen. It is to be emphasized that the employment of anesthetic technics in which there is inadequate elimination of car-

bon dioxide from the expired atmosphere, through the use of an improperly controlled semi-closed system, the partial inclusion of the soda lime in the closed system and the use of inefficient soda lime, produces the same results as if carbon dioxide were artificially added to the atmosphere. A thorough understanding of volume and rate of gas flows during respiration is essential to the employment of anesthetic technics which insure the adequate elimination of carbon dioxide. For example, in a semi-closed system without carbon dioxide absorption, flows of gas at least equal to the minute volume exchange are necessary to insure against carbon dioxide retention. This means that, in the average adult, total flows of ten liters per minute are required. Too little attention is paid to this important factor in ventilation, and serious retention of carbon dioxide often accompanies the use of semi-closed systems.

Ventilation in the patient under anesthesia is often inadequate. Justifiable emphasis has been placed upon the necessity for adequate oxygen supply to the patient. With the use of potent agents such as cyclopropane and ether and the fortification of the weaker agents such as nitrous oxide and ethylene with non-volatile drugs, and in the presence of an unobstructed airway, it is always possible to guarantee sufficient oxygenation. However, with the employment of potent agents and the use of adjuncts to weaker agents such as analgesics, barbiturates and curare the tidal and minute volume is often significantly reduced. In this state of diminished ventilation, the patient usually looks good because oxygenation is good. Depending upon the response of the patient to elevated levels of carbon dioxide and the degree of depression with drugs, there may be delayed or absent response to appreciably elevated blood levels of carbon dioxide. As a result, there may be an unrecognized and dangerous accumulation of carbon dioxide, causing the patient to exhibit abnormal changes in the circulation such as hypotension, depressed respiration, convulsions, increased oozing, etc.

VENTILATION FREQUENTLY MISJUDGED

Instruments have been developed which give dynamic recordings of alveolar and blood levels of carbon dioxide. With the use of these instruments, astounding retention of carbon dioxide has been demonstrated. These findings were in patients in whom trained anesthetists had been convinced that ventilation was adequate. The observations emphasized a universal and appalling lack of ability to detect deficiencies in ventilation. The observations should jar everyone into giving meticulous attention to ventilation and into thinking in terms not only of oxygenation but of carbon dioxide elimination.

The older technics of using nitrous oxide in high concentrations included the use of carbon dioxide. Again, a segment of the facts pertaining to carbon dioxide was employed without regard

for the total physiologic process. It was argued that carbon dioxide improved the ventilation, thereby increasing the amount of oxygen available to the hemoglobin traversing the capillaries of the lung. It was also argued that by shifting the oxygen dissociation curve to the right, a higher tension of oxygen was made available to the tissue. Both statements are correct, but the fact was overlooked that the total tension of oxygen is significantly diminished and that shifting the dissociation curve interfered with the uptake of oxygen by the hemoglobin. The reduction in oxygen supply to tissues which is the end result of low oxygen concentration in the respired atmosphere and the increase of carbon dioxide in the atmosphere, is a circumstance that cannot be justified as long as it is impossible to predict what low oxygen tensions will do to a particular patient.

Carbon dioxide often has been recommended for the hyperventilation of patients in the postoperative period, to diminish their tendency to develop atelectasis. For this purpose, mixtures of carbon dioxide and oxygen as well as 100 per cent concentrations of carbon dioxide have been used. It cannot be denied that improvement in ventilation in the postoperative patient will lower the incidence of atelectasis. However, the improvement in ventilation can be accomplished by a number of means, such as active or passive exercise, voluntary breathing exercises, stimulation by attending personnel, frequent change of position, etc. In each of these methods for improving ventilation, it is essential that the patient be given personal attention by someone experienced in the problem. There is adequate evidence to support the statement that equally good results can be secured by any of the other methods, rather than by using carbon dioxide. There is opportunity for undesirable response to carbon dioxide, such as depression of respiration and convulsion. It is submitted that effective stimulation of ventilation in the postoperative patient cannot be accomplished by writing orders for the intermittent administration of any mixture of carbon dioxide and that if personal attention to this problem is essential, good results can be accomplished equally well and much more safely without carbon dioxide.

UNNECESSARY IN RESUSCITATION

Another common use of carbon dioxide is its application in artificial resuscitation. It is regularly recommended for resuscitative purposes in drowning, electric shock, cerebral accident, etc. The situation is essentially akin to the depression of respiration produced by drugs, anesthetics or other means. The respiration is inadequate or non-functioning because the respiratory centers have been damaged by hypoxia, dissolution, hemorrhage, etc. The cells are deficient in oxygen supply, not in carbon dioxide supply. Carbon dioxide has been retained as a result of inefficient ventilation, and there is no need for adding it to the

respired atmosphere. Controlled investigation demonstrates no advantage and significant disadvantage. It has been stated that "nature's" response to a condition of depressed respiration and consequent hypoxia includes a carbon dioxide retention which is beneficial because of increased ventilation and a shift of the dissociation curve to the right. It is argued by the proponents that if this is "nature's" response, then the use of carbon dioxide in the resuscitating atmosphere is justified. "Nature's" response is an attempt to conserve a dwindling oxygen tension. If oxygen in excess can be supplied in the resuscitating atmosphere, there is no need for an elevation of the carbon dioxide tension.

CONCLUSION

An attempt has been made in this paper to

represent some of the uses and misuses of carbon dioxide. It is urged that those employing carbon dioxide or those in a position otherwise to interfere with respiratory physiology become thoroughly acquainted with the physiological processes in which carbon dioxide is involved. By so doing, a more rational approach to its use can be developed and more workable hypotheses can be projected. It is essential that segments of the total physiologic activities of carbon dioxide be applied correctly.

Scientific method can assist in the resolving of some of the controversial issues involving the use of carbon dioxide. With the development of a scientific attitude, it can be expected that there will be less occasion for argument about the application of carbon dioxide in the practice of anesthesia and greater opportunity for progress.

State University of Iowa College of Medicine Clinical Pathologic Conference

February 3, 1954

SUMMARY OF CLINICAL FINDINGS

A 15-YEAR-OLD white girl entered the hospital in January, 1953, for her 18th and last admission, complaining of intermittent lower abdominal pain, associated with nausea and profound weakness, of less than 24-hours' duration.

Since early infancy this patient had always appeared pale and rather yellowish, had fatigued quite easily, and had grown more slowly than normal. A female sibling had died at this hospital in 1941 of aplastic anemia, and a maternal aunt was treated for "pernicious anemia" by her local physician. In May, 1950, when the patient was 12 years old, the diagnosis of congenital hypoplastic anemia was made at this hospital, based upon repeated bone-marrow aspiration specimens showing extreme hypoplasia of all elements, and a peripheral normocytic anemia, pancytopenia, and thrombocytopenia. Osmotic fragility of the red cells was normal, and reticulocytes were in the range of 1-2 per cent. Extensive additional studies were done at that time, and were all normal, except for evidence of mild hypothyroidism (PBI 3.4 micrograms per cent, abnormally low RAI-uptake, and BMR-12). Other studies revealed normal pituitary and adrenal function. Free hydrochloric acid was present in the stomach, and she failed to respond to folic acid or vitamin B-12 therapy.

Since May, 1950, she had returned to the University Hospitals every 4 to 6 weeks for transfusions. At each admission the hemoglobin was 5 to 7 grams per cent, and she received 1000-2000

cc. of whole blood so that the total volume of blood given her over a 33-month period had been 27,300 cc.

Splenectomy, plus optional appendectomy, was done in October, 1950, but had no effect on the course of her chronic anemia. The spleen showed only mild fibrosis and endothelial hyperplasia.

Menarche occurred in August, 1950. Periods occurred at 4-week intervals, usually lasted about 7 days, and were said to be complicated by both dysmenorrhea and menorrhagia. In June, 1952, hysterectomy was considered, but because careful measurements during a menstrual period at the time revealed a blood loss of less than 200 cc., the operation was not performed. A bone-marrow biopsy, in June, 1952, was consistent with aplastic anemia, the deficiency of hematopoietic tissue appearing to involve all the marrow elements, myeloid, erythroid, and megakaryocytic, in equal degrees.

At the time of her last admission in January, 1953, the patient had the weight and height of a normal 10-year-old Iowa girl and appeared acutely ill. She was nauseated and apprehensive. There was a peculiar bronze discoloration of the skin, and the mucous membranes were pale. Pulse was 90 per minute, and the blood pressure was 80/40 mm. Hg. There was generalized tenderness to palpation over the lower abdomen, and the patient preferred to lie with the hips flexed. The liver was not palpable, and the spleen was surgically absent. Bowel sounds were normal. Rectal examination revealed a normal-sized and easily movable uterus; there was considerable tenderness to

palpation in the right cul-de-sac. A stool specimen contained no blood. X-ray examination of the abdomen demonstrated no evidence of obstruction or soft-tissue masses.

Laboratory studies at the time of admission revealed: hemoglobin less than 7.5 gms. per cent; red blood cell count 2.45 million per cu. mm.; white blood cell count 4,450 per cu. mm., with 62 per cent polymorphonuclears, 32 per cent lymphocytes, and 4 per cent monocytes. Platelets were not counted, but a platelet count in October, 1952, had been 8,000 per cu. mm. Urinalysis revealed no albumin or formed elements, and a negative Myers test was reported.

Despite frequent transfusions of fresh whole blood, totaling 3000 cc., and various supportive measures, the patient's hospital course was chaotic. Epistaxis occurred frequently, and was difficult to control. On the 9th hospital day she began menstruating profusely, and she continued to have brisk vaginal bleeding until her death. Lower abdominal pain increased steadily, and occasional bouts of hematemesis occurred.

On the 18th hospital day the hemoglobin was 9.3 gms. per cent, red blood cell count was 3.54 million per cu. mm., white blood cell count was 1,950 per cu. mm. with 39 per cent polymorphonuclears, 37 per cent lymphocytes, 22 per cent monocytes, and 2 per cent unclassified cells, platelets 2,000 and reticulocytes 0.2 per cent. Also at that time, further studies revealed: bleeding time 10-plus minutes, coagulation time 4 minutes, prothrombin time 23 seconds (control 15.5 seconds), Van den Bergh 13.0 mgs. per cent in 1 minute, and still 13.0 mgs. per cent in 30 minutes, cephalin flocculation 4-plus in 48 hours, thymol turbidity 2 units. A blood culture subsequently showed no growth.

On the 19th hospital day she became cyanotic and increasingly dyspneic. Hemoptysis soon followed, and she died in shock early on the morning of the 20th hospital day.

CLINICAL DISCUSSION

Dr. Robert L. Jackson, Pediatrics: The patient we are to discuss this afternoon did not have a common disease, nor was she selected because she presented a difficult diagnostic problem. The clinical diagnosis is stated in the first paragraph, but a child who is found to have congenital hypoplastic anemia is a very challenging problem. Recent reports suggest that combined hormone and vitamin therapy may be efficacious in the treatment of future cases of this sort.

The child with hypoplastic anemia, such as this patient, invariably is extremely stunted in growth, and when this child was originally seen in the Pediatric Department in 1941, it was for that reason. At that particular time her sister was a patient in the hospital and was being treated for mastoiditis in the Otolaryngology Department, and subsequently she died. She also had a severe

hypoplastic anemia. The child at that time was found to have a hemoglobin of 11.5 grams, a red count of 3.1 million, and a white count of .2 per cent. No bone marrow studies were done then. She did have evidence of chronic respiratory infection. A tonsillectomy and an adenoidectomy were done, and she had no particular trouble insofar as bleeding was concerned subsequent to this surgical procedure. She then was re-presented to us when she was 12 years of age, and at that time she was a very stunted child. Bone-age studies were done; Dr. Van Epps will show you these. She was about the average size of a six- or seven-year-old child. We studied her from an endocrinological point of view, but there was no clear-cut evidence of any endocrine disturbance. The only abnormal finding was a slightly low PBI, and the radioactive uptake studies were questionable in regard to hypothyroidism. It was the general consensus that it would be inadvisable to give her thyroid therapy because of the difficulty in sustaining an adequate blood picture. This is a point we should discuss later.

She had five blood transfusions, and at that time it was Dr. Hamilton's opinion that a splenectomy might be helpful, inasmuch as she was not responding to repeated transfusions and dietary management. She had had a complete course of folic acid and iron and liver shots by her family physician, none of which had been at all efficacious before she was referred here for diagnosis and further treatment. A splenectomy was done in October, 1950, and subsequently she showed no particular improvement. She was seen repeatedly and was given transfusions. The patient had the onset of her menarche in August, 1950, and her first periods were not particularly unusual, but the duration and amount of her vaginal flow was so excessive that it was felt that the bleeding should be controlled by castration or sterilization. We will have Dr. Goddard discuss this phase of the problem.

It really is a very pressing problem when these young girls come in with severe thrombocytopenia and eventually go into shock. At the time of her last admission, she was seen on consultation by almost all of the departments in the hospital, including Medicine, Gynecology, Radiology, and Surgery. It was everyone's opinion that the best we could do was to give her fresh blood transfusions to control the bleeding. She died in shock. We have some x-ray films which Dr. Van Epps will briefly show you, and then we would like to have Dr. Goddard discuss the problem from a gynecological point of view.

Dr. Eugene F. Van Epps, Radiology: At the time of the examination the child was 12 years old. The bone age was 9 years, indicating that there was a serious delay in her osseous development. The calvarial size also indicated delay in development, since it is quite small. Aside from its diminished size, the skull was normal. Exam-

ination of the long bones showed nothing to indicate the presence of a myelofibrosis, and there was no evidence of subperiosteal resorption of bone.

On her last admission because of her severe abdominal pain, there was concern over the possibility of a ruptured viscus. Roentgenographically, there was no evidence of that, and no evidence of intestinal obstruction or peritonitis. The renal shadows, however, were not visualized.

The last radiographic examination was a post-mortem chest film. This showed considerable infiltration, extending outwards from each hilum to the extreme lateral aspects of the lung fields, sparing the apices and, to a lesser degree, the bases. This finding is common in pulmonary edema, but hemorrhage, of course, could not be excluded. In light of the fact that the child died of hemorrhage, I would be surprised if the lungs did not show some blood, but I should also expect pulmonary edema to be present.

Dr. William B. Goddard, Obstetrics and Gynecology: The thing that I would like to make clear at the outset is that, from the gynecological standpoint, the patient being discussed is not an ordinary adolescent menorrhagia. This is a completely different problem.

The female has two places to bleed from that the male does not possess. One of these is the uterus; the other is the follicle. This girl had the problem of abnormal, heavy bleeding from her thrombocytopenia. And because of her inability to build up her red blood cells, she was not able to keep up with her losses the way a normal girl does after periods.

In the ordinary menstrual period, the arterioles collapse and buckle, and the upper part of the endometrium becomes necrotic, sloughs, and crumbles. After the tips of these arterioles are sealed off, new vessels are formed in the basalis portion of the endometrium, and the menstrual period is over. For some reason due to abnormalities of estrogen stimulation, in the ordinary functional bleeder this buckling doesn't take place normally.

In this type of patient, i.e., one who has thrombocytopenia, the tips of the broken arterioles do not close off, and she doesn't stop bleeding from there. So you have a different pathologic physiology.

The bleeding in the ordinary functional menorrhagia is pretty impressive at times. It can be treated with estrogen, but in the acute stage, estrogen therapy in this type of patient is almost completely worthless. One problem which arises in any heavy bleeding associated with menstrual periods of the young and old follows from the fact that the uterus is not a necessary organ to life. The patient can get along very nicely without her uterus. It has suffered from the "When in doubt, take it out" philosophy, so that there is a tendency to take out the uterus at times. The patient

bleeds; take out the uterus. It's sort of a couplet in many physicians' minds, and you have to go back to decide the basic problem and the reason for bleeding. This patient apparently had a normal endocrine situation. She had her menarche at the normal time, around 12. She had four-week periods, and her first were apparently normal. Then she began to develop the heavy vaginal bleeding.

Excessive bleeding varies widely with individual patients. The normals are considered 10 to 200 cc. Now, 10 cc. would not have been a problem in this young lady, but 200 cc. each month could be a serious drain on her ability to renew her blood volume. In June, 1952, this patient was discussed, and in going over the chart I find that she was seen in the clinic. At that time the hematologist felt that there might well have been some hemolytic aspects at least to this one episode. The patient bled about 150 cc. at this period, and her hemoglobin dropped from approximately 9 to 5½, I believe. Thus, evidently, those who saw her on the Gynecology Service were not at all impressed with the amount of bleeding or with the relationship between the bleeding and the drop in hemoglobin. After knowing a patient's future course and seeing the autopsy protocol, hindsight indicates that it would have been best if something had been done for this patient. Be that as it may, nothing was done at this time, and the patient continued in her final course.

What should have been done? We have to stop menstruation, and we may have to stop ovulation. The simple and obvious thing to do, it would seem, is to take the uterus out. It isn't quite so simple, however. In the acute phase, this girl's last admission, I don't think we'll have any argument that the question of hysterectomy was completely out of the picture.

Now, in the interim phase—maybe. If we were faced with this type of patient again, we might well consider hysterectomy in the interim phase. The advantages are that it leaves the ovaries in her body to continue supplying endogenous estrogen. The disadvantages are that it is an operative procedure. Another method of stopping this girl's menstruation, and a very good one, would have been x-ray radiation—a so-called amenorrheal dose. Its big and obvious advantage is that it does not require an operation, but it has the same disadvantage as hysterectomy in that it is useless, as far as we know, in the acute stage. It does cut the estrogen way down. Patients who have had amenorrheal doses of radiation still have cornified epithelium in the vagina, so they still get some estrogen. What effect would that have on a young lady in her teens? Probably very little. Of course, we can't be sure, but probably very little.

One other thing—you might consider a temporary amenorrhea. Give this patient about 200 r., if the radiologist is willing. You can give these

girls in this age an amenorrhea from 3 to 24 months. That procedure would give you a chance to see what she would do—whether or not she would just go ahead and bleed from other areas. Therefore, looking back on this girl, I think we should have been wiser to have stopped her menstruation in some manner—probably not by hysterectomy, but probably by radiation. One thing as regards the gynecological manifestation of this case that I would like the group to carry away from here is this: by achieving temporary or permanent amenorrhea, you have not cured this patient, for you have not cured her cytopenia. You have removed one major source of bleeding, but you must not think of the hysterectomy or irradiation as a cure.

Dr. Jackson: Dr. Warner, if you will show the sections, we will try to save the rest of the time for discussion.

Dr. Emory D. Warner, Pathology: At the time this patient died, she did have massive intra-abdominal hemorrhages. She had some 500 cc. of blood in the peritoneal cavity, and she had had previous hemorrhages of unknown sizes into the peritoneal cavity. There were large amounts of old, organizing blood clots attached to the peritoneum, matting the loops of bowel together in the pelvic region. The source of bleeding appeared to be ovarian follicles; and although she was pretty well along in a menstrual period at the time of death, she was still bleeding from a ruptured ovarian follicle. She was continuing to bleed from a ruptured follicle even though she presumably was a couple weeks beyond the date of the rupture of that follicle. Then there was other evidence of her bleeding tendency. She had patchy, submucosal bleeding, generalized. She had rather massive bleeding into the lung. There was some pulmonary edema, in that there was fluid in excess of the amount of the blood. It was hard to evaluate how much pulmonary edema was present because there was a great deal of blood in the lung, unassociated with any appreciable inflammatory reaction. So much for the bleeding, presumably associated with her severe thrombocytopenia. In the bone marrow there were essentially normal distribution of types of cells and essentially normal-appearing cells. There was not nearly enough bone marrow and far too much fat, whereas it should all have been hemopoietic tissue. The patient had a very extensive hemosiderosis. Now, that is a little hard to evaluate. The lymph nodes in the abdominal region were in the drainage bed of the intra-abdominal hemorrhage and old, organizing blood clots. In addition to this, there was generalized hemosiderosis of the reticulo-endothelial system. This was present in the bone marrow. It was present in nodes outside the abdominal region, and it was variable in that some of the lymph nodes showed very little. Others showed a moderate amount, as did the bone marrow and Kupffer cells. In addition to that,

there was very extensive hemosiderin deposition in the parenchymatous cells themselves, particularly in the pancreas and the liver. Associated with this hemosiderosis, there was beginning fibrosis in the pancreas. Another finding of interest is that both kidneys were in the pelvis. They took their blood supply from the iliac arteries, rather than from the aorta.

Though some of the reticulo-epithelial cells contained very little hemosiderin, there were many of them that contained massive accumulations, and the pancreatic parenchyma cells were likewise packed with it. There was a large amount. And in the liver the parenchymal cells were loaded with hemosiderin—a hemochromatosis.

The patient had had approximately 27,500 cc. of blood over a two and one-half year period. If you add that up, it amounts to nearly 14 grams of iron given intravenously. The only iron that she was losing in appreciable quantities was in menstrual flow. Judging from the figures that Dr. Goddard gave us, this loss wouldn't have added up to very much. So she had a very great deal of excess iron.

I looked up a previous case that we had a few years back. A 70-year-old woman with hypoplastic anemia required numerous transfusions to carry her along. Over a two year period she had 108 transfusions. Finally she died, as this patient did, of hemorrhage incident to thrombocytopenia. The older woman died of a subdural hemorrhage, rather than of intra-abdominal hemorrhage, but at the time of autopsy she had a very extensive hemosiderosis, even more extreme than the case today. There was considerable fibrosis of the pancreas and quite a bit of fibrosis of the liver. She presented a fairly good picture of hemochromatosis, and she had had 108 transfusions in a period of two years.

There are a couple of other points that I would like to make. I mentioned the fact that the pelvic kidneys were of some interest. I looked up the autopsy on this patient's sister, who died in this hospital some 12 years ago and who likewise had hypoplastic anemia and pelvic kidneys. The patient's maternal aunt had been treated for "pernicious anemia." I was unable to find any further details about the nature of her disease.

Thus there were two in the family, at least, with hypoplastic anemia. And they both happened to have pelvic kidneys, whatever that may mean—nothing significant to my knowledge. They both died of hemorrhage, presumably from thrombocytopenic purpura. The sister had very little hemosiderosis. She was in here some three months. She came in with respiratory infection, with mastoiditis and complications. Her hypoplastic anemia was diagnosed at that time. She had 9 transfusions before she finally died of subarachnoid hemorrhage. The hemosiderosis in that one was relatively slight. There is one other thing in this case, and that is that the mother of these girls

died unexpectedly a year or so ago. No satisfactory cause for death was found at the autopsy. That patient, however, was seen just a couple of weeks before she died, and she was not anemic. At the time of autopsy the mother did not have pelvic kidneys.

I will leave the discussion of the hemosiderosis to Dr. Fowler.

SUMMARY OF NECROPSY FINDINGS

The main necropsy findings were hypoplasia of bone marrow, massive intra-abdominal hemorrhage, hemosiderosis of several visceral organs and bilateral pelvic kidney. The hemorrhage was caused by a ruptured right ovarian follicle. There was clinical and pathologic evidence of previous hemorrhages coincidental with menstrual periods. The bleeding from ovarian follicles was perhaps aggravated by a hemorrhagic diathesis, mainly thrombocytopenic in type. The existence of a bleeding tendency is supported by the massive terminal pulmonary hemorrhage and ecchymoses at the time of autopsy. The hemosiderosis is difficult to evaluate in view of the great number of transfusions. A defect in iron metabolism is suggested by discoloration of skin as an early symptom, by the presence of large amounts of hemosiderin in parenchymatous cells of the liver and pancreas, and by the virtual absence of hemosiderin in the reticulo-endothelial cells of many of the lymph nodes. Thus the deposition of hemosiderin is not a diffuse reticulo-endothelial accumulation. There is slight fibrosis of the pancreas, but not of the liver.

NECROPSY DIAGNOSES

Hypoplastic anemia, clinical.
Hypoplasia of bone marrow.
Old and massive recent intra-abdominal hemorrhage, from ruptured ovarian follicles.
Massive pulmonary hemorrhage, bilateral.
Hemosiderosis of liver, pancreas, lymph nodes, bone marrow.
Subpleural and subepicardial ecchymoses.
Absence of spleen, surgical.
Pelvic kidneys, bilateral, with anomalous blood supply.

RETARDATION OF GROWTH

Dr. Willis M. Fowler, Internal Medicine: Cases with excessive deposits of iron in various tissues, hemosideroses, such as we have had described today, have increased in frequency in recent years since the use of transfusions has become so prevalent. With the giving of large amounts of blood by transfusion to patients of this type who require transfusions at relatively frequent intervals over long periods of time, large amounts of iron are deposited in the tissues. Dr. Warner has pointed out that in this particular instance some 14 grams of iron were given in the form of transfusions. In the majority of patients the iron de-

rived from hemoglobin is deposited in the reticulo-endothelial tissues and to some extent in the parenchymatous organs of the body. When it is deposited in these organs without producing any fibrotic reaction, one may say that the patient has a case of hemosiderosis, meaning that there is excessive iron in the organs and the tissues, but there is no inflammatory reaction and actually no altered function of the organs. In other instances, and I don't know that we can adequately explain which ones, the patient will develop hemochromatosis. In this latter disease, we find the excessive amounts of iron deposited not only in the reticulo-endothelial tissues but also in the parenchymatous organs. As a result of this deposit of iron in these locations, fibrotic changes occur. By definition, *hemochromatosis* means the condition in which there is excessive deposit of iron, but in addition there is a cirrhosis of the liver and usually fibrosis of the pancreas, with diabetes and pigmentation of the skin. The cirrhosis of the liver is an integral part of that clinical picture.

Hemochromatosis occurs in an idiopathic or endogenous form for reasons that we do not understand. This deposit of iron may occur with a normal iron intake, presumably because of some defect in the metabolism or absorption of iron into the body. In addition, we have the exogenous type which results from repeated transfusions. Some of the cases of hemochromatosis that have been reported are actually only the deposition of iron, or hemosiderosis. Why the fibrotic reaction occurs in some of the patients as a result of the iron and why it does not appear in others are questions that I don't believe we can answer. Experimentally, so far as I know, no one has been able to produce fibrotic changes by the giving of iron; but everything seems to point to the fibrosis as being a consequence of the deposition of an abnormal amount of iron. The differentiation of the cases is perhaps due to the duration of the condition. In other words, those that have had this deposition of iron for long enough periods of time may develop the fibrosis. What part is played by the amount of iron deposited in the tissues is unknown.

There are a number of features of iron metabolism that come into play in the consideration of idiopathic or endogenous hemochromatosis. In ordinary iron metabolism, the iron is absorbed from the upper portion of the gastro-intestinal tract primarily in the ferrous state. It is taken across the mucosal barrier by the apoferritin, which takes the iron from the intestinal tract and forms ferritin. From this, the iron is absorbed into the blood stream and is carried by the blood stream and deposited in various parts of the body, primarily in the reticulo-endothelial tissues. Iron in these depots is available for the formation of hemoglobin, but exactly what regulates the absorption and deposition of iron is something that I don't believe I can answer. It is said that when

apoferritin is completely saturated with iron to complete the formation of ferritin, no more iron is absorbed; and it has been presumed that this occurs in normal individuals, so that they absorb only as much iron as they need. On the other hand, the patient who has had an iron-deficiency anemia will continue to absorb iron indefinitely because of its availability. We have run a great many serum iron determinations on normal individuals and find them varying all the way from 20 to 265 micrograms per cent, regardless of the hemoglobin level in the individual. We have also given iron to patients who do not have anemia and find that they do absorb it, so that one can produce an increase in the serum iron by the oral administration of iron even though that patient does not have anemia. Those patients are absorbing iron through the mucosa and into the blood stream even though they have no need for it. Thus there are still some questions about iron absorption and its regulation that we do not understand.

I don't believe that we have an adequate explanation as to why hemochromatosis will develop in one person and not in another, nor do we have an entirely adequate explanation as to how much iron a certain individual is going to absorb. It has been said that an individual has no satisfactory method of excreting iron, once he has taken it into his body. That is, when a patient is given transfusions and the blood is destroyed, the iron portion of the hemoglobin is deposited in the body and it is there to stay. Consequently, in these patients who have had repeated transfusions, there is always the danger of the development of hemosiderosis. Undoubtedly this always occurs to some extent, but there is also the danger of the development of hemochromatosis. It is true that a small amount of iron is excreted regularly in the urine and some also into the gastro-intestinal tract, but the amount that is excreted is very small. The body hangs onto iron very tenaciously for re-utilization when it is needed.

Since intravenous iron has become rather prominent as a therapeutic measure, cases of hemochromatosis and hemosiderosis have been reported in patients who have received this form of therapy. A few cases of hemochromatosis have been reported in which the disease has developed from medicinal iron given orally, so that the giving of large amounts of iron by mouth over a long period of time may not be as free from danger as previously supposed.

Dr. Jackson: The patient whose case we are considering did have definite hematemesis just prior to her death. One other point I forgot to mention was that the mother of this child had toxemia of pregnancy. She had had definite toxemia with three of her four children and also during the time she was carrying this particular child. The baby was born prematurely, but made satisfactory progress during early infancy.

I would like to state at this time that in re-

viewing the literature we find that in the past almost all children with this disease died of intercurrent infections in early childhood, like the little sister, but we now have a number of these children living into early adult life, or at least into adolescence, at which time the problem of vaginal bleeding arises for the girls, as it did for this one. There have not been a sufficient number of follow-up studies on the boys to show us the relative prognosis in the different sexes, a piece of information which would help us to some extent to answer the problem we have put to Dr. Goddard.

I should now like to have Dr. Gould present very briefly the case of a little boy we have under management at the present time. Very recently there have been a few reports of dramatic improvement after the administration of cortisone and B-12.

Dr. Samuel H. Gould, Pediatrics: Briefly, this is the case of a six-year-old boy who was first seen in May, 1950, with a diagnosis of anemia. The hemoglobins ranged at that time from 4.6 to 6.8, and he received many transfusions, probably an average of about one a month. He had a diagnosis of hypoplastic anemia, made on the basis of three bone marrows. They were reported as being hypocellular, with rare erythroid elements. The hemoglobin on 10/6/53 was 4.5. He was given a whole blood transfusion, and on 10/28 the next hemoglobin was 8.7, and the reticulocytes were .2 per cent. That was common throughout. Cortisone was given on 11/17/53. The hemoglobin was 8.4 just one week afterward—still a small reticulocytic response. We added B-12 on December 8 by injection, 15 mgm. three times a week. He had been on a maintenance dose of cortisone, 50 mgm. a day, and 15 micrograms of B-12 three times weekly. The hemoglobin was 7.4, 7.6, etc., and gradually increased until the last one on 1/26/54 was 9.6. The reticulocytes gradually increased until the last one, on the 26th, was the highest—6.1 per cent. As has been reported before, the red blood count remained the same.

Dr. Jackson: Dr. Hamilton, would you like to comment on this?

Dr. Henry E. Hamilton, Internal Medicine: I believe this patient's disease falls into the general pattern designated as familial hypoplastic anemia. As you can see, when these patients get into trouble because of their disease, the hemological values are similar to those found in individuals who have developed aplastic or hypoplastic anemia from a drug poisoning such as benzene. On the other hand, individuals with familial hypoplastic anemia ordinarily live much longer, and there is sometimes a family history. In 14 separate papers reporting on familial hypoplastic anemia, it was noted in six of them that more than one sibling had this disorder. Most of the affected children had the peculiar pigmentation of the skin seen in the child presented today, and in addition, many of them had other congenital

anomalies. I was interested to see the anomalies in this patient involving the genito-urinary tract. As far as reported cases are concerned, horse-shoe kidneys, absent fingers, squint, mental retardation, and small heads have all been noted. The marrow is hypoplastic. It is generally thought that the disorder is due to a recessive gene; however, some individuals believe that environmental factors may play a part. I noticed in the case histories today that the problem of toxemia during pregnancy came up in the two instances. Some authors considered the possibility of toxoplasmosis, rubeola, toxemia drugs or other and unknown factors as being responsible for the effect on the bone marrow. However, in the case histories presented today we have not been able to incriminate any particular toxin. The question was asked whether or not boys develop into manhood while they are running the course of this disease. I believe there is one case reported in the literature of an individual surviving to 26 years of age who finally succumbed much in the manner in which this child did. In other words, there finally is complete dislocation of the hemopoietic system, and the patient dies.

There is a very interesting report recently published by Altman and Miller of the University of Rochester,¹ in which a bluish, fluorescent substance was found in the urine and identified as anthranilic acid. Further, when L-tryptophane was given to these children, the anthranilic acid output increased, whereas in normal infants on pediatric wards the anthranilic acid could not be found. Subsequently, the substance was identified in eight other individuals suffering from hypoplastic anemia. This finding, of course, brings up the possibility that we are perhaps dealing with an inborn error of metabolism.

Arrowsmith, Burris, and Segaloff had an interesting report in the Proceedings of the Central Society for Clinical Research this year reporting results of treatment of an 18-month-old child with hypoplastic anemia.² Repeated blood transfusions had been required to maintain the child in normal hemophilic balance. The individual was given cortisone, and a reticulocytosis was noted, yet, the red count did not go up and there apparently was no decrease in the requirement for blood. They found after giving cortisone that a large number of megaloblasts were present in the bone marrow. This, of course, represented a change at least in the morphology of the cells of the marrow and produced some hope that something else might be done to force maturation and release of the cells. They therefore gave Vitamin B-12 at the same time and found an increase in the reticulocyte as well as a significant rise in the red cell count and hemoglobin. A marked decrease in blood requirement was noted. If they discontinued the cortisone and continued the B-12, the child reverted to the pre-treatment state.

These two reports and the results obtained in the patient now on the Pediatric Service bring up the possibility, and a rather exciting one, that there is something that can be done for these unfortunate people. Dr. Jackson stated that the condition was rare. Perhaps it is. Yet, it is quite possible that there are many cases that are simply not recognized and that are not particularly severe. We certainly see our share of "hypoplastic anemias" of unknown cause on Medicine. Apparently we cannot force their bone marrows to function properly. It is a real problem and is always with us on the wards in this hospital. Thus, I think there are some practical points that can come out of this discussion.

Dr. Moore and his group in St. Louis recently presented an interesting article on chronic bone marrow failure in which they found a few adults who apparently responded quite well to cortisone therapy.³ It is true that they found no way of picking out the patients who would benefit, but, I think for the first time we have another and new approach to these diseases.

Dr. Jackson: Any questions or further discussion? Yes, Dr. Gould.

Dr. Gould: We ran this boy's urine for anthranilic acid after he was on cortisone and B-12, but found none. Unfortunately we did not examine the urine for anthranilic acid prior to the cortisone and B-12 therapy.

Dr. Jackson: Yes, Dr. Warner.

Dr. Warner: I'd like to come back to the hemosiderosis again for a moment. I'd like to add one note of possible caution. As pointed out by Shorr, particularly, there is accumulating evidence that the so-called vaso-depressor substance in shock, as seen in cases of muscle injury and other instances of intractable shock, chemically is ferritin.⁴ Also it is stated that a large number of patients with hemosiderosis have died in intractable shock without a satisfactory autopsy explanation for it. Thus we raise the question of whether ferritin may not be a potential danger, particularly if its release is triggered in some way. It is theoretically conceivable that by such a means one can make a bad situation worse. Thus, the ferritin present in excessive amounts may be dangerous.

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The JOURNAL of the Iowa State Medical Society

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COLLEGE OF MEDICINE ISSUE

Once more, as in the Aprils of former years, the JOURNAL is fortunate in being able to present to its readers a set of articles by members of the faculty of the College of Medicine at S. U. I. It is particularly fitting, we think, that this issue is dedicated to the Dean of the College, Dr. Norman B. Nelson, who last July was welcomed to his new position by the physicians of Iowa.

The subject matter this year is varied, but reflects the high standards which our medical school has consistently maintained. The JOURNAL takes this opportunity to thank the committee that planned this issue and assembled the articles, and especially it thanks the chairman, Dr. E. W. Scheldrup.

ANNUAL MEETING

Every member of the Iowa State Medical Society is personally invited to attend the 104th Annual Meeting, to be held in Des Moines, April 25-28, 1954. Now is the time for you to write for your hotel reservations.

As noted in the March JOURNAL, your Program Committee has arranged for you to listen to a fine group of speakers. In addition, the usual special events will take place, as indicated in the program that has been sent you.

Although it was impossible to find space this year for scientific exhibits, our commercial exhibitors will be on hand to welcome you. Remember that those gentlemen, by renting space in which to show you their wares, are making a con-

siderable contribution toward the financing of the sessions. They will be glad to greet you and, we think, will offer some suggestions that you will find valuable. And so that their coming may be mutually satisfying, we hope you will let them know how much all of us appreciate their cooperation.

We hope to see you in Des Moines this month.

HEART DISEASE AND THE IOWA FARMER

For a statistical study of this problem, see the Department of Health section in this issue of the JOURNAL.

Statistical evidence that heart disease is responsible for more deaths in our rural counties than in those which have an urban population has focused attention on the plight of the cardiac farmer. During the past three years, there has been increasing interest in the problem and a growing conviction that something can and should be done to rehabilitate the man on the farm who has heart disease, or to help him adjust his activities to the limitations which his disability imposes upon him. It is reasonable to suppose that a farmer is more likely to die of heart disease than is the city dweller because a farmer is confronted by the necessity of going out into all kinds of weather, in mud and in snow, and must expend much effort in feeding his livestock and assembling and operating his machinery. Yet, granting this premise is only one step in solving the problem. It must be noted that each individual farmer is an industrialist and a capitalist. Not only is he exposed physically, but with the ups and downs of price supports, the market trends and the political upheavals, the mental and emotional strain on the cardiac farmer may be even more devastating than the physical factors. Every farmer is a gambler, in the sense that he is self-employed, and farmers make up a larger share of the population of rural counties than manufacturers and merchants compose in the populations of cities. His city cousin, on a regular payroll, may have far less of worry and fewer sleep-repelling problems to exhaust his cardiac reserve. Yet many a farmer knows nothing but farming, is efficient in his occupation, and would be very unhappy in a city, even if he were able to support himself there.

Then one wonders, when he observes that a small rural county (Taylor) has the highest death rate from heart trouble, whether the problem consists solely of the fact that farming is one of the most strenuous of occupations. When one considers that this county has no hospital of any kind, that there are only five doctors of medicine in the entire county, and that only one of these is a recent graduate, one wonders what happens to the man who develops heart trouble there. In a city or near a city, a patient can be hospitalized and given all the benefits of oxygen, sedatives, anti-

coagulants and nursing care almost without delay.

The determination of the Iowa Heart Association to try to do something about the cardiac farmer is highly commendable. The American Heart Association has felt that a rehabilitation program similar to "Cardiac-in-industry" and the "Heart of the Home" programs could be developed on the basis of what physicians, job analysts and agricultural economists, etc., already know about energy requirements and the determination of physical energy capacity. At Hotel Savery in Des Moines on February 23, preceding the Third Annual Heart Conference, representatives of the following organizations and agencies met to discuss the possibility of finding out more about heart disease among farmers and deciding what, if anything, could be done about it: State University of Iowa College of Medicine, Iowa State College Extension Service, Iowa Farm Bureau Federation, Iowa State Medical Society, Division of Vocational Rehabilitation, State Department of Health, The American Heart Association, and The Iowa Heart Association.

As might have been expected, some very worthwhile suggestions were forthcoming from the various individuals of so able an assembly. The extension department of Iowa State College showed films on labor- and step-saving devices for the up-to-date farmer. These films are available for showing at Farm Bureau and soil-conservation programs and could well be used at many other rural functions. They are both entertaining and enlightening. A suggestion that some single Iowa county be selected and used for a pilot study met with general approval.

The American Heart Association has joined with the Indiana Heart Foundation and Purdue University in a five-year research program in which it is hoped that more will be learned about the energy required by various farm operations. Upwards of \$30,000 will be spent on this research effort. It is gratifying that our own state, though not the first, may still be one of the pioneers in exploring the possibilities of conservation of cardiac reserve, prophylaxis of heart disease, and rehabilitation of cardiacs, among farmers.

THANKS

The Iowa State Medical Society wants to take this opportunity to express its appreciation to the Committee on Public Education for its work in developing the series of health articles which appear in WALLACE'S FARMER.

Committee on Public Education

D. F. Ward, M.D., Chairman
B. T. Whitaker, M.D.
W. D. Abbott, M.D.
T. D. Throckmorton, M.D.
H. J. Smith, M.D.
R. B. Stickler, M.D.

The Society also wishes to pay tribute to the following physicians who have contributed articles to this series up to April 1, 1954:

C. O. Adams, M.D.—"Farm Injuries"
Peirce D. Knott, M.D.—"When Should Johnny Stay Home From School?"
C. A. Trueblood, M.D.—"Frostbite"
D. F. Rodawig, M.D.—"Ruptures"
C. B. Larson, M.D.—"Arthritis"
John T. Bakody, M.D.—"Stroke"
A. J. Entringer, M.D.—"Cold Weather Health Hazards"
O. N. Glesne, M.D.—"Advice for the Expectant Farm Mother"
Abraham Gelperin, M.D.—"Requirements for Septic Tanks and Disposal Tile Fields"
"Clean Drinking Water"
"Animal Diseases Transmissible to Man"
George H. Finch, M.D.—"Brucellosis"
T. E. Kane, M.D.—"Obesity and Dieting"
M. E. Alberts, M.D.—"Common Skin Conditions in Children"
P. F. H. Pugh, M.D. and
F. M. Stark, M.D.—"The Approach to Emotional Illness"
John G. Thomsen, M.D.—"Adolescent Skin Problems"
Frederick Fuerste, M.D.—"Vision Problems in Children"

The first article appeared in October, and they continue to appear every two weeks under the heading of "Iowa M.D.'s Say—." They are directed toward the interest of the farm reader.

Since WALLACE'S FARMER has approximately 200,000 subscribers, we feel that this is a very worthwhile educational project and we appreciate the cooperation we receive from the Iowa doctors.

THE DOCTOR-CITIZEN

An increasing number of county medical societies and individual physicians, throughout the past few years, have been taking leading roles in community activities. In some instances—such as the Cerro Gordo Society's leadership in establishing an isotope laboratory, the Johnson Society's initiative in setting up a county health service, and the Scott Society's sponsorship and participation in a series of question-and-answer forums—those activities concerned health. In other instances—such as the Wapello Society's picking up the bills for a youngsters' baseball team and the Crawford Society's making a sizeable contribution to a community swimming-pool fund—the projects have been just as essential, and, since they have had nothing directly to do with health, they reveal a growing sense of civic responsibility among the members of our profession.

The JOURNAL has been delighted to learn of those ventures and has helped to publicize them whenever it could. Only the limitations of space have prevented its also recording the virtually countless addresses that individual doctors have

made to lay groups and the positions of civic responsibility that they have accepted.

Doctors of medicine are busy men and women, and merely by caring efficiently for their individual patients they render the most valuable public service conceivable. There is absolutely no argument on that point. Indeed, as our Society's President-Elect has remarked, just so long as M.D.'s keep doing that job, it won't make any real difference how many sensational articles on medicine appear in the national magazines. But doctors' public service and their leadership in civic affairs must not be confined to individual doctor-patient relationships, or even to the health area, regardless of how busy they are. Every really capable individual is a busy one, and not only our state and country, but our towns, without exception, need precisely those busy people constantly to take new loads of work upon their shoulders.

Some of that work and responsibility is political, for it is by means of politics that we run things in our democracy. If, by being political, it has become dirty, doctors are exactly the people who can best take the lead in cleaning it up. Merchants and manufacturers, frequently, are hesitant even to express an opinion, for fear that, by way of reprisal, someone may refuse to buy canned peas or tennis racquets from them. Employees—though some very able people are in that group—are similarly reluctant, lest they lose their jobs. But doctors can take stands on the issues they believe in, and as natural leaders they have an obligation to do so.

The General Secretary of the AMA has circulated copies of a letter dealing with public affairs that one physician has begun sending regularly to his patients along with his statements for professional services. Each of us has convictions on every such matter, and there is no part of the Code of Ethics to prevent any one of us, as a free American, from presenting them by whatever means are available or from trying to win others to those points of view.

It is regrettable that the necessity of absenting themselves from their practices for considerable periods of time doubtless will continue, in most cases, to prevent doctors from becoming candidates for state and national political office. But there is nothing to prevent and everything to recommend their accepting local posts, urging their ideas upon legislators and congressmen, or voting—and encouraging others to vote—for the individuals in whom they have confidence and for the measures of which they approve.

Remember to attend the meeting of Blue Shield Participating Physicians, at 5:00 p.m., on Monday, April 26, in the Main Ballroom, of the Ft. Des Moines Hotel.

MENTAL HEALTH INSTITUTES AND WORKSHOPS

The Iowa Mental Health Authority has found Mental Health Institutes and Workshops perhaps the most effective way of bringing mental health principles and information to the general public. These institutes are planned for leaders of professional groups and organizations.

Three workshops for parents and teachers have been conducted in Davenport, five of them, for teachers alone, have been conducted at the Child Welfare Research Station at the University, and one has been held at Estherville. Workshops have also been held for public-health nurses, school nurses, mental-hygiene leaders and the clinic staffs of mental-health centers.

Annually for the past six years, in cooperation with the Iowa Neuropsychiatric Society and the Iowa State Medical Society, eminent psychiatrists or neurologists have spoken at meetings of general practitioners on various phases of mental health. Discussion periods have always followed those addresses, and there is no question that by those means psychosomatic concepts of illness have become better integrated in Iowa medical practice than would otherwise have been the case.

It is particularly opportune at this time for the JOURNAL to point out that the College of Medicine of the State University of Iowa is cooperating in this program. And it wants also to congratulate the Mental Health Authority for its part in making it possible.

HEALTH RESOURCES HANDBOOK

At about the same time that this issue of the JOURNAL reaches members of the Society, each of them will receive his copy of A HANDBOOK OF RESOURCES AVAILABLE TO PHYSICIANS, a 128-page, cloth-bound directory providing all essential information about the agencies, both governmental and private, which engage in health and in allied social-work activities in Iowa. In addition, it contains an appendix providing summaries of the laws and governmental regulations that govern the practice of medicine. We want to recommend it to you as strongly as we can.

The HANDBOOK, prepared under the direction of the Society's Committee on Medical Service, is, so far as we have been able to discover, the first of its sort in the country. It is authoritative, in that the top executive of every private agency and of every governmental agency represented had an opportunity to supply material for it, and had an opportunity to correct its presentation.

The Committee hopes that physicians will make use of it in three ways. First, it should help them make more complete use of the private agencies that do health work. Second, it should provide them with adequate and ready answers to some

of the questions that their patients raise regarding problems that are not strictly medical, but lie, instead, in the field of social work. And third, it should help them to cooperate more fully with the State Department of Health, the Narcotics Bureau, and the University Hospitals.

But the HANDBOOK is intended not just for the doctor, but for his employees as well. The doctor's secretary or office-nurse should be encouraged to regard it as a textbook for her in-service training. From it, she can acquire information that will help her to understand her doctor's place in his community and his relationships with various branches of government—information that will make her more efficient and more comfortable in her job.

And besides, the book will call attention to the gaps in our health services that remain to be filled.

The JOURNAL, as well as the Committee on Medical Service that prepared it and the Trustees of the Society who financed it, hopes that every physician will examine the book carefully so as to see the various sorts of information that it contains, that he will encourage his employees to read it, and that he will keep it handy.

APRIL IS CANCER MONTH

It is gratifying to note that the Iowa Division of the American Cancer Society has maintained its record for the third time as the best unit in the nation for cancer-control work. Incidentally, ours is the only unit that has won that distinction three times.

A new record for total contributions was established in Iowa during 1953—\$573,205. Our state thus has a *per capita* average of 22c, in contrast with the national average of 12c.

Since 1948, the Iowa Division has maintained the largest program of nurses' scholarships. Two hundred forty-nine nurses have begun training under its sponsorship; of those, 79 have graduated and 136 remain in school. It is heartening to learn that over one-third of the graduates returned to their home counties to begin their nursing careers.

The Iowa Division has equipped itself particularly well for service to the medical profession and the public in its specialty by assembling and maintaining the largest library of films on cancer that is to be found anywhere in the country. It furthermore provides funds for research and was instrumental in the American Cancer Society's honoring 29 Iowa research scientists for their work during 1953.

During 1954, the Division plans to produce a 10-minute sound film in color describing its work, create cheap animated and illuminated displays suitable for use by its units, utilize TV to the limit through producing its own programs, expand its Junior Crusader plan for reaching adults through grade-school children, establish a curriculum for

cancer-control education in high schools, expand its film library, expand its on-the-job cancer education program, wind up its Eastern Star drive for sickroom equipment, set up a state publicity committee, establish more service groups for service cases, and, in other ways, to make the most efficient use possible of the funds that have been entrusted to it.

The goal of the 1954 Cancer Crusade is \$560,000, and the JOURNAL is sure that every member of the Iowa State Medical Society will cooperate in every way he can in making it a success.

LETTER TO THE EDITOR

A Method for Equal County Representation in the Offices and Committees of the Iowa State Medical Society.

Sir:

The need for a critical evaluation of local representation in the conduct of the business of the Iowa State Medical Society was recently suggested in a News Bulletin issued from the Des Moines office. And indeed, we have long been aware of the paucity of representation from certain of the county societies. For example, no member of the Davis County Medical Society has held a state office or served on a state committee in more than one hundred years. Therefore, we have worked out a method for giving the county societies an opportunity to share in those posts of responsibility in proportion to the sizes of their enrollments, and we should like it transmitted to the membership for their consideration.

First, we should like to review the situation which we think needs remedying. Our data were obtained from the secretarial reports of the Iowa State Medical Society for the years 1924 to 1953, inclusive, in which the counties of residence of the officers and committee members are listed. The *ex-officio* positions we did not tabulate, for we wished as far as possible to eliminate reduplication.

Our study revealed that the number of positions of responsibility in the State Society has increased from 66, in 1924, to 179, in 1953. We computed the average of those two numbers, and found the average number of member physicians in each of the counties since 1945, a number that is reasonably like the average since 1924. Then, we computed how many positions each of them should have had per year and compared those figures with the number of posts that each actually received.

Our tabulations, which the JOURNAL's Publication Board did not permit to be printed with this letter, seem to us to be very revealing. We shall be glad, of course, to show them to everyone who is interested. They show that, on the basis of membership, no county society in the state was

TABLE I
STATE OFFICES HELD PER COUNTY IN PAST 16 YEARS

None in 16 years		One in 16 years		Two in 16 years		Three in 16 years		Four in 16 years	
Allamakee	(.52) *	Cherokee	(.76)	Calhoun	(1.16)	Hancock	(.89)	Adams	(.41)
Benton	(1.05)	Chickasaw	(.75)	Hamilton	(.89)	Howard	(.47)	Cass	(.83)
Butler	(.64)	Crawford	(.61)	Hardin	(1.14)	Louisa	(.32)	Guthrie	(.94)
Cedar	(.46)	Delaware	(.53)	Monona	(.69)	Mills	(.47)	Jones	(.67)
Clayton	(.82)	Franklin	(.63)			Mahaska	(1.31)	Wayne	(.40)
Davis	(.70)	Harrison	(.62)			Plymouth	(.72)	Winnebago	(.40)
Green	(2.29)	Monroe	(.58)			Ringgold	(.30)		
Grundy	(.71)	Shelby	(.39)			Sac	(.71)		
Iowa	(.65)	Tama	(.49)						
Keokuk	(.66)								
Lyon	(.34)								
Mitchell	(.71)								
Palo Alto	(.83)								
Taylor	(.33)								
Worth	(.31)								

* Number of offices a county society could have expected to have per annum.

entitled to appreciably fewer than three state offices or committee memberships in ten years. And none, on the same basis, was entitled to have more than 17 in an average year. To say the least, the distribution that actually occurred was quite different from what it should have been.

Table I lists those counties which have had fewer than five representatives in the Iowa State Medical Society's policy-making positions in the last 16 years. The number in parentheses, in each instance, is the number of positions per year to which the county society was entitled on a basis of its membership. For example, (.5) means that the society should have had one office at least one year out of two, and (15.0), if it occurred, would indicate that the society was entitled to 15 offices each year. Table II lists those counties which are constantly over-represented in the policy-making positions of the Iowa State Medical Society and the degree of overrepresentation. The numbers in parentheses, again, indicate how many the respective constituent groups were entitled per year on a basis of membership.

The 42 counties listed in Table I have been inadequately represented; indeed 16 of them have had no representation at all. Greene County might have expected 27 representatives during the past 30 years, but has had none. Any of the counties having a factor of .4 or higher has been under-represented if it has had fewer than 9 officers or committeemen in the past thirty years. More than half of the counties, thus, have been under-represented.

Lack of interest, size and organization are the reasons that have been given to explain these errors in representation for many of the county medical societies. Lack of interest and organization could be corrected by the information which participating representatives would bring home to their fellow townsmen.

In order to accomplish a fair distribution of state offices and committee memberships, we suggest that the factors for the various counties be adhered to as closely as possible. In order to implement this proposal, each county society should

submit a list of those doctors who are willing to serve in such capacities.

TABLE II
COUNTIES OVERREPRESENTED IN THE ISMS OFFICES AND COMMITTEES

County	The number should have been	The number actually was	The excess, over a period of 16 years
Cerro Gordo	51	76 in 16 years	25
Dubuque	62	80 in 16 years	18
Polk	274	475 in 16 years	201
Pottawattamie	61	89 in 16 years	28
Scott	90	108 in 16 years	18
Story	34	58 in 16 years	24
Wapello	42	45 in 16 years	3
Washington	20	43 in 16 years	23
Webster	45	69 in 16 years	24
Woodbury	110	164 in 16 years	64

Conclusion: We have submitted a plan for equal county representation in the Iowa State Medical Society. This method is based on the average doctor-population per county and the number of offices and committee memberships available.

Very truly yours,

HAROLD J. PEGGS, M.D.

PAUL T. MEYERS, M.D.

LAWS CONCERNING CHILDREN AND YOUTH

Copies of "A Guide to Iowa Laws Concerning Children and Youth," a 55-page booklet prepared by the Institute of Public Affairs and the College of Law at the State University of Iowa, in cooperation with the Iowa Commission on Children and Youth, now can be had for 15 cents each, from the Institute.

Through it contains no more than a single page explicitly devoted to "Medical Care," and though the approach used throughout the booklet is entirely legalistic, doctors will find it an informative and useful summary of the procedures and restrictions they need to observe in the social work they do as citizens and as advisors to parents.

President's Page

As the official year of the Society and my term of office approach their ends, I welcome this opportunity to acknowledge the debt of the Iowa State Medical Society and myself for the assistance which the members have given for the past year. The Society itself can point with great pride to those of its members who have contributed their time and efforts to improve Medicine and the State Society during this period. I, too, recognize that the progress which has been made has been due to the outstanding work of the Trustees, the Council, the Committee Members and the Staff at the State Office.

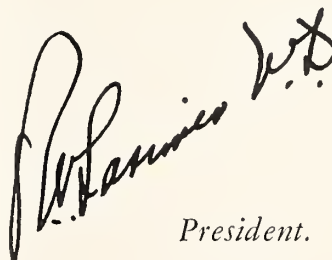
The Trustees' report which will be given at the State Meeting will show that the Society has been managed in an excellent fashion so that our financial position is the strongest that it has ever been. This has been accomplished in spite of a year of the greatest activity, with greater financial demands than ever before.

The reactivation of the Council has been remarkable, and the result is a tribute to the Councilors and to Dr. Bernard. The Council members have met regularly, with excellent attendance, and they have willingly assumed their new responsibility in relation to the development of Society policies.

The various committees of the State Society have been extremely active. I should like to enumerate the accomplishments of each one of them, but the list would be too long. You are urged to read the Committee Reports which will be published in the House of Delegates Handbook and to attend the meetings of the House of Delegates, when various supplemental reports will be given. Obviously, disagreements concerning policies are a part of any democratic organization. It is only when those who disagree make an effort to determine the thinking which went into the development of a certain policy, that any sort of general agreement among our total membership can be reached.

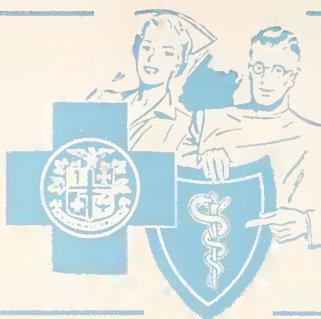
The State Society and you, as a member, may well be proud of the Staff at the State Office. Because, during the year, Dr. Bernard felt that the time had come for him to be relieved of his responsibilities, a redistribution of the work load was made. We were fortunate that competent personnel had been trained and was available for the change. There have been great improvements in various office practices, bookkeeping methods and so on, which have increased the efficiency of the Central Office. The JOURNAL has become more valuable and attractive.

I am grateful to the many individuals who have contributed to the work of the Society during the past year. There are many things to do in the future, and I am sure that they will be done under the direction of Dr. Caughlan during this coming year.



President.

BLUE CROSS



BLUE SHIELD



Visit Our Lounge During the Annual Meeting

The above scene of activity was captured at the Blue Cross-Blue Shield Lounge in 1953.

Every doctor is cordially invited to stop by again this year for a do-nut and cup of coffee and a visit with the personnel in the booth regarding any Blue Cross-Blue Shield matters.

This year you will find us in the North Room of the Hotel Fort Des Moines, which is adjacent to the Main Ball Room where your House of Delegates meets.

An information booth will be inaugurated this year, in which a listing of all regular and special meetings will be maintained to help you. Please feel free to utilize this new service.

The Annual Meeting of Blue Shield Participating Physicians will be held in the Main Ball Room on Monday, April 26 at 5:00 p.m.

A breakfast meeting of all Blue Shield Board Members is scheduled for 8:00 a.m. Monday, April 26, in the Flamingo Room, Hotel Fort Des Moines.

BLUE SHIELD MONTHLY STATISTICS

Members, estimated as of January 1, 1954	336,307
Claims processed for payment in February	1,010
Amount paid in Claims during February	\$320,526.03

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

EPILEPSY AND THE FUNCTIONAL ANATOMY OF THE HUMAN BRAIN, by Wilder Penfield, M.D., and Herbert Jasper, M.D. (Boston, Little Brown, 1954. \$16.00).

THORACIC SURGERY, by Richard H. Sweet, M.D., Second Edition. (Philadelphia, W. B. Saunders Company, 1954. \$10.00).

THE ALLERGIC CHILD: A HELP & GUIDE TO PARENTS, by Harry Swartz, M.D. (New York, Coward McCann, 1954. \$3.95).

YOU AND YOUR HEALTH, by Edwin P. Jordan, M.D. (New York, G. P. Putnam, 1954. \$3.95).

THE JEALOUS CHILD, by Edward Podolsky, M.D. (New York, The Philosophical Library, 1954. \$3.75).

LECTURES ON THE THYROID, by J. H. Means, M.D. (Cambridge, Massachusetts, Harvard University Press, 1954. \$3.00).

BOOK REVIEWS

DIAGNOSIS OF ACUTE ABDOMINAL PAIN, by William Bequarth, M.D. (Chicago, The Year Book Publishers, 1953. \$5.00).

The "General Practice Manuals," to which this book belongs, are admirably conceived and dedicated. The present work is the twenty-first in the series. It is written by an assistant professor at the University of Illinois, who has done an excellent job of putting "common sense" into the usual signs and symptoms of acute abdominal disease. Sections in the book include bedside examination and diagnosis, acute intestinal obstruction, diseases for which immediate operation (a) is imperative, (b) can be delayed, and (c) is contraindicated or dangerous. There also is a section on "Traumatic Wounds of the Abdomen" and, most unusual, one on the diagnosis of "Abdominal Lesions in Infants."

The book is admirably suited for the general practitioner, the internist and the young surgeon. The general descriptions are well done, lucid and succinct, and case illustrations and figures give added spice to the reading. The reviewer's only criticisms would be that the section on gastro-esophageal hemorrhage have been deleted as not pertinent to the subject, and that more attention should have been paid to the location and character of abdominal pain.

D. A. Glomset, M.D.

CLINICAL MANAGEMENT OF BEHAVIOR DISORDERS IN CHILDREN, by Harry Bakwin, M.D. and Ruth Morris Bakwin, M.D. (Philadelphia & London, W. B. Saunders Company, 1953. \$10.00).

It is encouraging to note the increasing emphasis on the psychological aspects of pediatrics, and this book represents a good balance in considering both the psychic and physical in children's disorders.

In using the term "behavior disorders" the authors connote the fact that etiologies are varied and can run the gamut from physical conditions such as tuberculosis, epilepsy, rheumatic fever, etc. to problems of mental functioning such as inferior intelligence and to problems relating to emotional development such

as aggression, negativism, and sexual difficulties.

The book has kept abreast of current thought. For example, the authors point out that telling children that death is like going to sleep can induce fear of sleep in the child. They recommend instead that the child be told that death is "insensibility to all sensations, thereby eliminating fear of premature burial which is not uncommon among children."

In most ways this is a most commendable and valuable book, but the reader may find a number of things to cavil about. These include an overambitious preface and some awkwardness in organization which results in redundancy and repetition. Also, the medical treatments might better have been placed in a separate section and made more concise and specific, for certainly many of the treatments recommended will be improved upon and these piecemeal sections will thus be rendered obsolete in a short time. The compartmentalization of the medical section would have facilitated the revision and enlargement of the book from time to time.

Despite these minor reservations, this book is a practical guide and reference source and is recommended to the general practitioner, to the pediatrician, and to others engaged in work with children.

Herbert C. Merrillat, M.D.

RESPIRATORY DISEASES AND ALLERGY: New Method of Approach, by Josef S. Smul, M.D. 80 pages, no illustrations. (New York, Medical Library Company, 1953. \$2.75).

This short monograph is dedicated to the author's "scholarly" daughter and "talented" son. There is little else to commend it. It is supposed to present a "new method of approach," but the reviewer fails to find anything new in the entire book. Each disease is dealt with extraordinarily succinctness. Neoplastic diseases of the lung, for example, are disposed of in a page and a half. It is difficult to determine which readers the book is pointed toward. Perhaps nurses or biology students could find some merit in it. The reviewer, as a doctor, cannot.

Daniel A. Glomset, M.D.

DERMATOLOGIC MEDICATIONS, by Marguerite Rush Lerner, M.D., and Aaron Bunsen Lerner, M.D. (Chicago, The Year Book Publishers, 1954. \$3.50).

This small volume is divided into two parts. The first lists dermatologic drugs and preparations, including many new entities. Because they are new, the evaluation of many of those latter is not yet precise, but this section does bring one up to date on the newest medications and is therefore a useful book for reference.

The second part outlines a routine for the treatment of a few dermatologic conditions. But, since such a section was inserted, it seems to me that it should have been made more comprehensive. As it is, the fact that only a very few conditions are considered diminishes the value of the book.

This volume is probably of more use to the dermatologist than to the general practitioner.

S. Greenhill, M.D.

Iowa Academy of General Practice

President—Paul F. Chesnut, M.D., Winterset

President-Elect—Frank D. McCarthy, M.D., Sioux City

Vice-President—Dean C. Snyder, M.D., DeWitt

Secretary-Treasurer—William M. Sproul, M.D., 912 Equitable Bldg., Des Moines

Executive Secretary—Mrs. Elizabeth Nelson, 3600 Franklin, Des Moines

GENERAL PRACTICE LUNCHEON AT STATE MEDICAL MEETING

The Iowa Academy of General Practice will again sponsor a luncheon for the general practitioners of the state during the annual meeting of the Iowa State Medical Society at Des Moines in April. This year the luncheon will be held on Tuesday noon, April 27, in the Ranch Room at the Hotel Fort Des Moines. Tickets will be available at the registration desk.

As before, this is a social meeting only, and is held to furnish an opportunity for general practitioners to get together. The annual business meeting of the Academy will be held in Des Moines on September 22 and 23 in conjunction with an interesting scientific session. So no business will be discussed at the luncheon. No speaker will be presented.

All general practitioners and their friends are urged to attend this luncheon.

At the time this JOURNAL is published, the annual meeting of the American Academy, held in Cleveland, will be history. No official report is planned, but any significant occurrences of that meeting may be announced for your information. At the time this is being written, the Cleveland meeting gives promise of being eventful.

AIMS OF THE ACADEMY OF GENERAL PRACTICE

Perhaps this is a good time to review the aims and purposes of the American Academy of General Practice and its Iowa Chapter. There have been many times recently when the Academy has been named or referred to in the press. Some of these items—though, thank goodness, not all of them—either state or seem to imply that the Academy is opposed to the traditions of American Medicine which stand for honest, decent practice and that just because a man chooses to engage in the general practice of medicine, he thereby relegates himself into the category of incompetent doctors. Both of these allegations levelled at general practitioners as a group are quite patently false. Yet what should the American Academy of General Practice as an organization do about these charges?

The rush of doctors into specialization after World War I shifted emphasis to that direction,

and specialists were extolled in an era of great development in medical science. During that period, general practitioners were still general practitioners, largely unsung and unnoticed. A large proportion of them were trying earnestly to keep abreast of the advancements, using any method at their command, and were adapting the new material to their problems. At that time, the idea of postgraduate courses for general practitioners was ethereal. Nevertheless, because the general practitioner was sensitive to this situation, he did not wait for someone else to take hold of the problem, but set out to solve it himself. Thus the American Academy of General Practice came into being.

Since the problem dictated the purposes of the organization, it is not surprising that the primary aim of the Academy is to furnish American families with better family doctors. This is the philosophy in back of the statement of aims and purposes in our Constitution.

Therefore, first and foremost we must concern ourselves with medical education as it deals with young men entering the profession, as well as with the working doctor. All over the country our state chapters organized postgraduate courses which are accessible to the busy doctor. Our national organization holds an annual scientific assembly which is designed by general practitioners for general practitioners. All chapters collaborate with other medical organizations and the medical colleges to assist with and correlate study programs for general practitioners. And we publish GP, an outstanding publication covering subjects of interest to men in general medicine and surgery.

Work is progressing toward the formation of recommendations for the development of new general practitioners to meet the need for well-trained family doctors all over the nation.

Beyond these important contributions to improvement in medical care for the American people, we have unexpectedly been called upon to defend general practitioners as a group from unwarranted criticisms. This job is not one that we chose for ourselves. We do not care to enter into organization controversies within medicine, thus diverting energies and time from our primary purpose. Nevertheless, we do believe there are intelligent methods to solve these problems, whether big or small, and shall always strive for that ap-

(Continued on page 188)

Edmund G. Finney
COMMISSIONER

[illegible]

adjusted death rate by counties before definitely stating that in one area of the state heart disease was more prevalent than in another. When the counties are divided into three groups as follows: A—counties which have no city with a population of 2500 or more; B—counties with one or more cities of 2500 to 10,000 population; C—counties which have a city of 10,000 or more population—the rate is as follows:

	No. of Deaths	Rate per 100,000 Estimated Population
Group A	2,329	376.5
Group B	17,224	371.5
Group C	19,359	370.2

Group A includes Adair, Adams, Audubon, Butler, Clayton, Fremont, Ida, Louisa, Taylor, Van Buren, Wayne and Worth counties. Group C in-

cludes Black Hawk, Boone, Cerro Gordo, Clinton, Des Moines, Dubuque, Floyd, Jasper, Johnson, Lee, Linn, Mahaska, Marshall, Muscatine, Polk, Pottawattamie, Scott, Story, Wapello, Webster and Woodbury counties, and Group B is made up of the remaining sixty-six counties.

Diseases of the heart are generally thought of as taking the aged group in our population, and it is true, the median age for both sexes for the four-year period is 73.9 years, for males 71.8 years and for females 76.8 years. Mean ages for the same period are 72.3, 70.5 and 75.0. However, in the overall picture 10,030 or 25.9 per cent of the total deaths occurred before the decedent was 65 years of age.

The Division of Vital Statistics is at present tabulating the deaths for the four-year period in the cities and towns 2500 to 10,000 population. This may point out further the need for consideration of the causes and effects among the rural population as well as the small town group. As noted in the table previously mentioned, there seems to be a slightly higher rate in the rural counties. However, the small difference would not be significant without further investigation.

By June 1 or shortly thereafter we shall have a list of heart deaths by occupation for the calendar year 1953 and subsequent years. It will be of further assistance in planning a program of prevention for future years.

INFECTIOUS HEPATITIS IN IOWA

From 1931 through 1945, infectious hepatitis was reported as appearing in occasional scattered outbreaks in Iowa. The 1944-1945 Tama-Toledo epidemic, involving several hundred cases, has been described at some length.¹ During the same period, 1944-45, Carroll County reported an outbreak of over 100 cases. During a period of 4 years subsequent to 1945, our records give no evidence of the infection in the state. It is quite probable, however, that sporadic cases and small outbreaks were not reported. Our current high incidence period began with 17 cases reported from 6 southeast Iowa counties in 1950. It may be that Page County's 10 reported cases in 1951 developed as a result of a 1950-1951 focus of infection in adjacent Missouri Counties. Our 1953 figures show an increase to 1,811 reported cases from 74 counties with all areas of the state involved.

Cases range in severity from those mild enough to escape diagnosis unless a battery of laboratory tests is used, to those requiring prolonged periods of hospitalization. Jaundice usually does not appear in the milder case. Recurrences or recrudescences are frequent and are more likely to occur in the working and older age groups. The worker often insists upon returning to his job before complete clinical recovery. Eight deaths were reported in 1951, 15 in 1952 and 11 in 1953. Deaths are usually in the older age groups. During the last three years, for example, among the fatal

cases for whom we have ages, 11 were over 70 years of age and only three under 20.

Evidence points to a triple-threat method by which the infection is spread. The first is indirect transmission to the susceptible person from the intestinal tract of the case or those in the late part of the incubation period. The second method is infection from nose and throat discharges of the person with the infection. The third and less frequent, is from the blood of infected persons used for transfusions. Persons who have had known or suspected attacks of infectious hepatitis should not give blood for transfusions for several months following complete recovery. Control, then, must entail community sanitation, personal hygiene and education.

We have an additional method toward control of the disease. Gamma globulin has proved very effective in prevention of cases in exposed persons. Contrary to some recent publicity, its use against infectious hepatitis is not new or on a trial basis. We have used it over a three-year period in Iowa. Our first use of it was to control an outbreak of infectious hepatitis in one of the residence halls at the Woodward State Hospital and School. Without its use, over 20 per cent of family or close contacts develop as secondary cases. Its use reduces these secondary cases to less than 1 per cent—those occurring between 1 and 3 days after the gamma globulin was given. These obviously represent incubatory cases to whom gamma globulin failed to protect because it was given too late.

The prophylactic dosage used in Iowa is 1cc per 25 pounds of body weight, with a minimum dosage of 1cc and a maximum of 5cc. Since there is no age or sex difference in susceptibility, the gamma globulin is available for all close contacts regardless of age or sex. The supply, however, is not great enough for use on entire classrooms or schools in which a case has occurred.

Since our supply of measles- and infectious-hepatitis gamma globulin, through the Office of Civilian Health Requirements, is entirely dependent upon the numbers of cases reported, we must insist that physicians requesting this material report their cases.

Our Iowa Rules and Regulations give a seven-day isolation period for the case. For the protection of the case, our practicing physicians generally want the period to extend until clinical recovery. While our Rules and Regulations place no restrictions on family contacts, we definitely advise that school children who are family contacts of a case not return to school until they have had prophylactic gamma globulin.

Schools faced with the problem of infectious hepatitis may obtain a special bulletin containing sanitary control procedures by writing to the Division of Preventable Diseases of the State Department of Health.

1. Davis, J. D. and Hanlon, R. G.: Epidemic Infectious Hepatitis in a Small Iowa Community. *Am. Journal Hygiene*. 43:314-325, May, 1946.

INCIDENCE OF INFECTIOUS HEPATITIS

County	1950	1951	1952	1953	Total 4-Yr. Period 1950- 1953	1954 Jan. 1 thru Feb. 7
Adair	1	..	1	..
Adams
Allamakee	1	1	..
Appanoose	1	..	21	17	39	22
Audubon
Benton	1	..	..	..	1	..
Black Hawk
Boone	..	2	15	17	17	..
Bremer	1	1	2	3
Buchanan
Buena Vista	1	1	..
Butler	7	7	7	3
Calhoun	..	2	..	3	5	1
Carroll
Cass	1	1	..
Cedar	..	62	15	77	77	1
Cerro Gordo	42	42	42	1
Cherokee	1	1	1	..
Chickasaw
Clarke	5	5	5	..
Clay
Clayton
Clinton	11	24	35	3
Crawford	34	2	36	..
Dallas	7	7	..
Davis
Decatur	..	1	1	1	2	..
Delaware	8	8	5
Des Moines	35	183	62	280	5	..
Dickinson
Dubuque	16	16	10	10
Emmet	10	10	10	..
Fayette	2	2	5	..
Floyd	1	1	1	..
Franklin	11	11	8	..
Fremont	16	16	1	..
Greene	2	2	1	..
Grundy	9	9	9	..
Guthrie	..	7	3	10	2	..
Hamilton	4	4	4	..
Hancock	17	17	3	..
Hardin	12	12	1	..
Harrison	..	7	1	8	9	..
Henry	..	2	..	2	2	..
Howard
Humboldt
Ida	4	1	5	1
Iowa	8	3	4	3	18	..
Jackson
Jasper	24	24	1	..
Jefferson	..	1	4	5	1	2
Johnson	..	2	10	12	1	..
Jones
Keokuk	4	..	3	7	..	..
Kossuth	..	4	1	5	2	..
Lee	1	1	..	..
Linn	4	3	7	..
Louisa	1	..	2	11	14	..
Lucas	15	15	..
Lyon	12	12	..
Madison	1	23	24	..
Mahaska	61	61	11
Marion	..	3	24	27	2	..
Marshall	7	7	..	..
Mills
Mitchell	18	18	7	..
Monona	..	35	11	46	..	..
Monroe	1	1	..	..
Montgomery
Muscatine	..	54	48	102	2	..
O'Brien	4	4	..	..
Osceola	8	8	..
Page	..	10	22	12	44	..
Palo Alto	6	6	..
Plymouth	1	8	9	..
Pocahontas	1	19	20	6
Polk	..	2	92	507	601	23
Pottawattamie	22	207	229	22
Poweshiek	1	7	8	..
Ringgold	7	7	..
Sa
Scott	87	76	163	13
Shelby	14
Sioux
Story	..	1	..	20	21	..
Tama	2	5	7	..
Taylor	1	1	2	..
Union	5	5	..
Van Buren	34	34	4
Wapello	17	86	103	3
Warren	..	2	7	87	96	3
Washington	2	17	3	3	25	..
Wayne

INCIDENCE OF INFECTIOUS HEPATITIS

County	1950	1951	1952	1953	Total 4-Yr. Period 1950- 1953	1954 Jan. 1 thru Feb. 7
Webster	99	99	91
Winnebago	7	7	6
Winneshiek
Woodbury	..	4	55	1	60	3
Worth	4	4	2
Wright	1	..	1	..
Totals	17	80	755	1811	2663	326

HEART DISEASE INSTITUTE

The third Institute devoted to heart disease will be held at the Mayfair Hotel in Sioux City on Friday, May 14, 1954. The afternoon program, 3-5 o'clock, is to consist of addresses by Louis N. Katz, M.D., Chicago, on "Pathogenesis of Athero-sclerosis," and by Paul M. Zoll, M.D., Boston, on "Treatment of Coronary Artery Disease." The evening program, 7:30-9:30 o'clock, will consist of a presentation by the Faculty of the College of Medicine of the State University of Iowa on three topics: (a) "The Diagnosis of Congenital Heart Disease," (b) "Surgical Treatment of Congenital and Acquired Heart Disease," and (c) "The Present Status of Mitral Valve Surgery."

These institutes are sponsored by the Speakers' Bureau of the Iowa State Medical Society, The Iowa Heart Association, The State Department of Health, and the Departments of Internal Medicine and Pediatrics of the State University of Iowa.

MORBIDITY REPORT

Diseases	Feb. 1954	Jan. 1954	Feb. 1953	Most cases reported from these counties
Diphtheria	1	3	3	Woodbury
Scarlet Fever	243	237	136	Des Moines, Polk, Scott
Typhoid Fever	0	0	2	..
Smallpox	0	0	0	..
Measles	665	1,037	427	Cerro Gordo, Dubuque, Henry, Polk
Whooping Cough	28	23	5	Jasper, Scott, Story
Brucellosis	18	18	29	Scattered
Chickenpox	1,003	989	621	Des Moines, Dubuque, Polk, Scott
Meningitis meningococcus	5	4	5	Dubuque, Plymouth, Scott, Union
Mumps	513	363	147	Des Moines, Dubuque, Scott, Story
Poliomyelitis	9	1	5	2 Polk; 2 Shelby, others 1 to a county; 8 non paralytic; 1 unspecified
Rabies in Animals	25	12	26	Scattered—2 or 1 to county
Infectious Hepatitis	445	264	139	Palo Alto, Webster, Scott
Tuberculosis	55	37	50	For the State
Gonorrhea	59	66	72	For the State
Syphilis	112	159	134	For the State
Psittacosis	2	0	0	Polk, Muscatine

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Publications Chairman*, Dexter, Iowa

President—MRS. EDWARD B. HOEVEN, 224 E. Alta Vista St., Ottumwa

President-Elect—MRS. LESTER R. HEGG, Rock Valley

Secretary—MRS. ROBERT P. MASON, 5818 Chamberlain Drive, Des Moines

Treasurer—MRS. HOWARD SMEAD, 3333 Grand Avenue, Des Moines

LINES FROM THE PRESIDENT

"The time has come," the walrus said, 'to talk of many things.' That is the way I feel, too; so many things to talk about; so little time left in which to see all the people I had planned to see and talk with..., to do all the things which need to be done.

April is here, and the circle is almost complete. The Annual meeting will end my year as president. It will end these letters to you, and it will end the pressure of work; but the fine friendships which I have made will remain, always.

If I have forgotten to thank each one of you, personally, for your loyalty; for your many courtesies; for the gracious hospitality you so generously proffered; for your wonderful letters which often brightened an otherwise discouraging day; and for giving that "little bit of self" in service to others, please accept my sincere thanks, now. These things I shall remember...and treasure.... My souvenirs.

April is the time for all Iowa doctors' wives to forget responsibility for a brief time, to get away from the telephone and have a little fling, to call in Grandmother or Auntie to stay with the children and be off to the state meeting to meet old friends. If a new hat would give you that delirious lilac-time feeling, then buy a hat—a gay one designed to make your husband see you as the attractive person that you are. Start planning, now.

Programs are being printed, invitations have gone out to important guests, and all of the innumerable details of convention planning are falling smoothly into the pattern first visualized. However, members of committees will be working right up to the last moment of adjournment on Wednesday. So to them, a special "thank you."

The Auxiliary will celebrate its 25th birthday—a quarter century of service. We hope you are proud. See you at the Savery April 26, 27, 28.

VALERIE O. HOEVEN (MRS. EDWARD B.)

COUNTY AUXILIARY ACTIVITIES

Cass

The Cass County Auxiliary meets once a month with the doctors at the Hotel Whitney, in Atlantic.

Following dinner, each group holds its respective business meeting. The eleven members of the Auxiliary have pledged \$500.00 to the Atlantic Memorial Hospital for furnishings and equipment for the new wing. Various means of fund raising are under consideration. Newly elected officers are: Mrs. John F. Moriarty, President; Mrs. Jack LaRue, Vice President; Mrs. Llewelyn L. Long, Secretary-Treasurer.

MRS. LLEWELYN L. LONG

Dallas-Guthrie

The Dallas-Guthrie Auxiliary met on January 28 at the Pattee Hotel, in Perry, after luncheon with the doctors. Newly elected officers are: Mrs. Charles A. Nicoll, President; Mrs. Allen M. Cochrane, President-Elect; Mrs. William A. Castle, First Vice President; Mrs. William A. Seidler, Sr., Second Vice President; Mrs. Charles E. Porter, Secretary; Mrs. William Seidler, Jr., Treasurer. The Auxiliary voted to extend an invitation to the State President, Mrs. Edward B. Hoeven, to attend the March meeting.

Dubuque

To bolster their nurse-scholarship fund, the Dubuque County Medical Auxiliary sponsored a Mardi Gras ball on March 1, at the Hotel Julien. Students from a number of Dubuque schools helped with the decorations, and local stores volunteered the use of their windows for displays of nurse costumes and recruitment exhibits. Mrs. Charles Schueller and Mrs. John Thorson were co-chairmen.

Hamilton

1953 was an active and satisfactory year for the Hamilton County Medical Auxiliary. Our Future Nurses Club was the first and most pressing work on the agenda. After providing the school nurse with ample material and showing a movie to the high school girls, the Auxiliary held a coke party for all interested girls. The response was enthusiastic, and the occasion was used to elect officers and to plan future meetings. It is an encouraging development that one of the

charter members of the group is to receive one of the coveted cancer scholarships in May. At a beautiful candle-lighting ceremony held in the home of Mrs. Bruce Howar, our Nurse Recruitment Chairman, the charter members of the Hamilton County Future Nurses Club were presented their pins as gifts of the Auxiliary. At the same time the many new candidates for membership were taken in as "little sisters" of the original members.

Mrs. O. C. Buxton, our president, and several of our officers attended the State Auxiliary meeting. Also last spring a number of us attended the Webster County Auxiliary's sale of articles made by the handicapped of Iowa.

Our District Councilor, Mrs. Howard Minkel, met with us once, the Hamilton County Cancer Chairman, Mrs. L. Coe Sayre, was with us for one meeting, and at another meeting we were addressed by a member of the Hamilton County Hospital board.

Mrs. Forest F. Hall, TODAY'S HEALTH Chairman, saw to it that subscriptions were provided for the County Hospital, the high school and the Webster City municipal rest room. In addition we cooperated with the State Department of Health in running a contest over radio station KJFJ in which junior high students participated in a quiz program based on material found in TODAY'S HEALTH. Three half-hour programs were presented in this contest with Auxiliary members serving as judges.

At the last meeting of the year, we entertained the doctors at the home of Dr. and Mrs. Bruce F. Howar. A turkey dinner was served in buffet style, a new member was added to our group, and we closed the year with a great deal of enthusiasm for the coming year.

MRS. J. L. PTACEK

Wapello

On February 26, 21 members of the Wapello County Auxiliary met at the Cornpicker for a dinner meeting. Mrs. Edward B. Hoeven, State President, gave an interesting and informative speech on "Why We Are," telling the purpose of the Auxiliary and what is expected of us.

A project was discussed for making money for the AMA Education Fund, and it was decided to give two subscriptions of TODAY'S HEALTH to each of our two hospitals. The March meeting will be a dinner at the Cornpicker, and all seniors of both high schools who are interested in nursing as a career will be our guests. Films on nursing will be shown, and two R.N.'s will be present to answer questions.

MRS. WILLIAM D. MAIXNER

Webster

Mrs. Charles J. Baker was elected president of the Webster County Medical Auxiliary at a lunch-

eon meeting held recently at the Hotel Warden, Fort Dodge. Other officers for 1954 include Mrs. Paul Stitt, vice-president, and Mrs. Roger Drown, secretary-treasurer. Mrs. Matt Sanders is chairman of the craft and hobby show which will be held in May.

Woodbury

On March 24, the Sioux Med-Dames (Woodbury County Auxiliary) gave a royal welcome to the 75 doctors' wives who attended the Sioux Valley Medical Meeting, when they entertained them at luncheon in the Sioux City Club, at the Warrior Hotel. Mrs. Robert H. McBride, President, presided.

Mrs. Edward B. Hoeven, State President of the Auxiliary, was the honored guest. Her inspirational talk was concerned with the importance of preserving unity among doctors' wives in order to achieve strength not only in personal interests, but in all fields related to medicine and medical legislation.

Presidents of two newly organized Auxiliaries were introduced: Mrs. Frederick C. Bendixen, LeMars, President of Plymouth County, and Mrs. Leo F. Gaukel, Onawa, President of Monona County. Mrs. Joe Krigsten, Sioux City, received honors for her work as Fourth District Councilor.

Mrs. Chauncey E. Heffernan and Mrs. William Davey were in charge of a style show in which the doctors' wives of Sioux Med-Dames acted as models. This feature was particularly enjoyed.

In the evening, a special banquet was given at the Martin Hotel Ball Room and about 200 doctors and their wives attended. Dr. Anton Hyden, President, presided. Former presidents of the society were introduced. Dr. Omar A. Stauch and his wife presented 3-D pictures of their trip abroad. Local dealers supplied generous favors of baby orchids, candy, cigarettes and cigars. Iowa doctors elected to office were Dr. Wendell L. Downing, LeMars, Vice President, and Dr. Edward H. Sibley, Sioux City, Secretary.

MRS. JOE KRIGSTEN

HATS OFF!

Three County Auxiliaries in Iowa rated in the national TODAY'S HEALTH Contest. Congratulations to the subscription chairmen and to their Auxiliaries. They are: Mrs. C. Oelrich, Sioux County; Mrs. A. M. Cochrane, Dallas-Guthrie Counties; and Mrs. G. F. Keohen, Dubuque County.

RED CROSS DISASTER INSTITUTE

What medical teams would do in event of disaster or bombing, and how they would go about it were problems studied at the first Red Cross Disaster Institute in this area. The meeting was held for graduate nurses at St. Vincent's Hospital, on

February 12. Dr. E. J. Tierney, local disaster medical chairman, welcomed the nurses. Miss Helen Flanagan, Red Cross Nursing Service consultant of the St. Louis Area Office, conducted the sessions, which were held from 9:00 a.m. to 4:00 p.m.

Topics discussed in the morning included needs, types of disaster, effects, organization and cooperation with other agencies, as well as position in conjunction with defense. Following luncheon, which St. Vincent's Hospital served to all who attended, discussions dealt with mass care, rehabilitation, and working relationships between medicine, hospitals, and agencies.

In view of the possibility of what lawyers call "acts of God," as well as the chance of atomic bombings, Miss Flanagan displayed a large floor drawing of a high school building with auditorium. She explained how a building of this type could be converted into a disaster shelter. To alert our people to their own possibilities should the need arise, this plan should be shown in every Iowa town which has a sizable school building.

After a film showing an actual disaster condition, the meeting ended with a short question-and-answer period.

Medical Auxiliary members should avail themselves of the nursing and first aid courses offered by the Red Cross and should help to institute them in their own communities. Nurses not actively engaged in their professions would make excellent teachers. All Red Cross chapters will be glad to provide information about these educational programs.

MED STUDENTS' WIVES FORM JR. AUXILIARIES

It takes a very special kind of gal to be a good doctor's wife—and to begin early to adapt themselves to the demanding role, many medical students' wives are organizing junior medical auxiliaries.

Two such typical groups have been formed in Tennessee and Wisconsin. In 1946 students' wives in Memphis organized the Junior Medical Auxiliary to the University of Tennessee School of Medicine. The purpose of the group, which numbers about 60 members, is "to promote friendship and better fellowship among the wives of medical students." A former president writes that through membership in the group "we will prepare ourselves for the future as doctors' wives and will take our place as good citizens in the communities where we will make our homes."

Meetings of the Tennessee Junior Auxiliary are held twice each month and consist of both business and social sessions. One of the group's main projects is the maintenance of a student loan fund for use of married medical students.

In 1951 wives of medical students at the University of Wisconsin in Madison banded together to form "The Med-Wives." Because these enthusiastic young women wanted the organization to be "something more than a sewing circle," the Med-

Wives have utilized many of their monthly meetings to acquaint themselves with the duties and responsibilities they will assume as doctors' wives. The Med-Wives also work on such community projects as layettes for the Visiting Nurse Association, quilts for a local children's sanitarium, entertainment and gifts for hospital patients and many others.

Auxiliaries to medical societies in university towns can encourage development of such junior auxiliaries and lend support to such groups which have already been organized. Older doctors' wives should extend not only a friendly hand to such groups, but lend a helping hand to their program planning. The establishment of junior auxiliaries today means stronger medical auxiliaries tomorrow. From OHIO MEDICAL AUXILIARY NEWS, February 1954.

WELCOME TO OUR NEWEST AUXILIARY

With the assistance of Mrs. Joe Krigsten, Fourth District Councilor, Monona County has been organized, and will be known as "Doctors' Wives." Officers are: Mrs. Leo Gaukel, Onawa, President; Mrs. Paul Ingham, Mapleton, Vice President; Mrs. Stanley Anderson, Onawa, Secretary-Treasurer. Charter members, in addition to those already mentioned, are: Mrs. J. D. Fitzgerald, Sloan; Mrs. Paul Wolpert, Onawa; Mrs. E. E. Gingles, Onawa; Mrs. M. O. Stauch, Moorhead; Mrs. John McClellan, Onawa.

SPEAKERS' BUREAU SCHEDULES

RADIO SERIES

WOI—AMES, IOWA

Thursday at 11:15 a.m.

"TIME OUT"

April 1	Clothing
April 8	Food
April 15	Prompt Care
April 22	Medical Inventory
April 29	Accidents

WSUI—IOWA CITY, IOWA

Tuesday at 11:45 a.m.

"MAIN STREET MEDICINE"

April 6	Care of the Indigent
April 13	Medical Care for All
April 20	Rural Health Community
April 27	Medical Grand Jury

TELEVISION SCHEDULE

WOI-TV, AMES, IOWA

Friday at 8:00 p.m.

April 2	Heart
April 9	Rehabilitation
April 16	Mental Health
April 23	Schizophrenia

PHARMACISTS THANK STATE SOCIETY

At its meeting in Des Moines last month, the Iowa Pharmaceutical Association adopted the following resolution and transmitted it to the Iowa State Medical Society:

"WHEREAS, the Iowa State Medical Society graciously offered time on its television program to the Iowa Pharmaceutical Association; and

"WHEREAS, the Iowa Pharmaceutical Association was privileged to present three programs on the time allocated to the Iowa State Medical Association; and

"WHEREAS, there has been fine cooperation between the Iowa State Medical Association and the Iowa Pharmaceutical Association in this television activity and other inter-professional activities; and

"WHEREAS, it is the desire of the Convention to express its appreciation to the Iowa State Medical Society: Therefore be it

"RESOLVED,

1. "That we express to the Iowa State Medical Society our sincere appreciation for their fine cooperation in making available to the Iowa Pharmaceutical Association time and assistance to develop three television programs.

2. "That we express our appreciation to the Iowa State Medical Society for their many and fine offers of cooperation at inter-professional levels.

3. "That we express to the Iowa State Medical Society our thanks for the cooperation in arranging Doctor-Pharmacist meetings.

4. "That we express our desire to the Iowa State Medical Society for a continuation of these Doctor-Pharmacist meetings, and have a meeting with their Executive Council to discuss further activities to improve inter-professional programs of cooperation."

Aims of the Academy of General Practice

(Continued from page 180)

proach. However we may quiver inside and itch to pick up a pen, we believe open bickering, sensationalism, and counter-charges are unworthy of physicians, and besides, doctors need the respect and cooperation of all men, either in or out of the profession, to fulfill their obligations to the people of our country. The tornado will eventually blow itself out, but not without leaving damage in its wake. The job which follows is a constructive one, and we in the Academy prefer to have a part in the construction of a better profession, rather than to share in the activities of the destructive forces.

We have heard that we may hold some "political" influence in the organizations of American Medicine. Less than 10 per cent of the delegates to the House of Delegates of the American Medical Association are general practitioners. In Iowa, less than 25 per cent of the delegates to the State

Medical Society's House of Delegates are from the ranks of the general practitioners. We do not feel that we have any especial "political weight." Any "weight" we have, or ever hope to have, is or should be wholly measured by the merit of the propositions we present for the benefit of medicine as a whole. This is consistent with our aims and purposes to help improve medicine, not only as it relates to the general practitioner but as it affects all physicians.

Thus we work toward our true aims.

SYNTHETIC DRUG COMBATS SHOCK

L-arterenol, a relatively new, synthetic drug, has been found to be of value in combating shock, it was reported in the current *ARCHIVES OF SURGERY*. Its use, in conjunction with whole blood, blood plasma and fluids, helps raise blood pressure and makes it possible for some patients in profound shock to undergo extensive, and at times life-saving, surgical procedures, according to Drs. R. E. Fremont, N. M. Luger, S. N. Surks and A. Kleinman, of Brooklyn.

They based their conclusions on a study of 22 patients treated with L-arterenol. The group consisted of six cases of shock associated with an acute abdominal surgical condition, 12 cases of shock occurring during or after major operations and associated in three instances with considerable blood loss, and four cases of severe hemorrhagic shock. The drug brought the patients out of shock when added to fluid-replacement therapy, which in itself had been ineffective.

Intravenous injections of the drug resulted in an immediate, striking improvement in the majority of cases, the doctors said. It is superior in potency and controllability to some other similar drugs, they found, and the only adverse reaction they noted was a sloughing of skin.

The authors stressed, however, that L-arterenol must not be expected to abolish advanced hemorrhagic shock if the course of bleeding cannot be detected and eradicated. It is essential, they stated, that the cause of the shock state be known and definitive therapy undertaken as quickly as feasible. Lost blood must be replaced and continued bleeding stopped.

FAIL TO RENEW MEDICAL LICENSES

A total of 147 physicians previously licensed in Iowa failed to pay all or part of the 1953-1954 fee, after it was increased to \$3 as of July 1. There were 115 who made no payment because they had ceased practice or had other reasons for no longer thinking it worthwhile. In addition, 28 doctors outside the state and 4 within it paid \$1 each, but failed to respond when they were billed for an additional \$2.

COUNTY SOCIETIES

MEETINGS

Allamakee

Dr. Milton F. Kiesau, of Postville, was elected president of the Allamakee County Medical Society at an election held in Waukon in mid-February. Dr. Donald W. Dohnalek, of Waukon, was chosen secretary-treasurer, and Dr. J. W. Thornton, of Lansing, and Dr. C. R. Rominger, of Waukon, were chosen delegate and alternate delegate to the Annual Meeting of the Iowa State Medical Society.

Black Hawk

At the March 16 meeting of the Black Hawk County Medical Society, at the Elks Club in Waterloo, Dr. Walter Kirkendall, chief of medicine at the Iowa City V.A. Hospital, spoke on "Hypertension."

Calhoun

The February meeting of the Calhoun County Medical Society was held at the Brower Hotel in Rockwell City, where the address of the evening was given by Dr. R. E. Drown, of Fort Dodge, concerning the recent epidemic of infectious hepatitis in Webster County.

Dallas-Guthrie

Dr. Paul J. Trier, radiologist at the Des Moines V.A. Hospital, showed a moving-picture film on myelography at the January 28 lunch meeting of the Dallas-Guthrie Medical Society.

Delaware

The regular meeting of the Delaware County Medical Society was held on March 1, 1954. Dr. J. S. McQuiston, of Cedar Rapids, spoke on the subject of collagen diseases.

Johnson

Dr. J. R. Schenken, professor of pathology and bacteriology at the University of Nebraska College of Medicine, addressed the March 3 meeting of the Johnson County Medical Society on the topic "Tumors of Childhood."

Linn

The principal speaker at the February 11 meeting of the Linn County Medical Society was Dr. Ralph T. Knight, of the University of Minnesota, Minneapolis, and immediate past-president of the American Society of Anesthesiologists. His subject was "The Maintenance of Good Physiology."

Page

At the American Legion Club in Shenandoah, on February 18, Dr. George Pinne, of the Department of Dermatology at the University of Nebraska Medical School, spoke on "Various Uses of Cortisone in Treatment of Skin Diseases." Dr. Kenneth Murchison, of Sidney, was a guest of the Society.

Polk

Dr. Curtis J. Lund, chief of obstetrics and gynecology at the University of Rochester School of Medicine and Dentistry, Rochester, New York, spoke on "Use and Abuse of Blood Transfusion Therapy in Obstetrics" at the February 17 meeting of the Polk County Medical Society. Dr. Madeline M. Donnelly, director of the Division of Maternal and Child Health, of the State Department, introduced him.

Scott

Dr. Norman B. Nelson, Dean of the College of Medicine at the State University of Iowa, spoke to the Scott County Medical Society on March 2. His topic was "Your Medical School." Dr. C. A. Boice, of Washington, Iowa, councilor for the Eighth District, was a guest at the meeting and spoke briefly on the problems confronting the State Medical Society.

Wapello

The problem of alcoholism was discussed by Dr. Leo Sedlacek, of Cedar Rapids, at the February meeting of the Wapello County Medical Society. Whatever is being done for alcoholics now, he is reported to have said, is being done by Alcoholics Anonymous. He urged that they be treated as sick people.

Woodbury

Dean Norman B. Nelson, of the College of Medicine at the State University of Iowa, spoke on the topic "Your Medical School" at the March 18 meeting of the Woodbury County Medical Society, in the Mayfair Hotel at Sioux City.

DEATHS

Dr. Reu Lee Barnett, 74, who practiced in Cass County for 42 years, died on February 28 at the Atlantic Memorial Hospital, after a long illness. He had been made a Life Member of the State Society by reason of disability.

Dr. Roy V. Mater, 67, of Knoxville, died there on February 8.

Dr. Edward D. Morrison, 78, who had been a member of the Iowa State Medical Society for 35 years and practiced in Fort Dodge until he moved out of the state in 1949, died on February 21 in Los Angeles.

Dr. William Gordon Hansen, 28, who entered practice with Dr. C. L. Bain in Corning last November, died on February 16.

DOCTOR DRAFT TO BE RESUMED

The Army has announced that it will draw on Medical Corps Reserve rolls for activation of 276 physicians, beginning in July. This figure is expected to satisfy replacement needs until October. Priority II-type Reserves will fill the call-up, along with such as may volunteer.

During the fiscal year beginning July 1, the Defense Department expects that all hospital interns and residents obligated for military service will have to be called to active duty, though because of the backlog of 1953 medical-school graduates and a small number left over from Priority I, the calls may not be particularly heavy during the first half of the year.

Assistant Secretary Berry urges hospitals to make short-term arrangements with such men, so that they "will have a means of livelihood and the opportunity to continue their education, as well as to contribute to the needs of the hospitals" while awaiting orders the last six months of 1954 and the first six months of 1955.

The National Advisory Committee to Selective Service advises that after July 1, 1955, all physicians with military-service obligations should get commissions during their internships. Doing so will remove them from the jurisdiction of their draft boards, and will allow the Defense Department to request delay in the call-up of men for whom the

Department has recommended additional training.

A poll of medical-school deans has revealed the following preferences among present-day students: (1) The Army is preferred by 27 per cent, the Navy by 37 per cent, and the Air Force by 36 per cent. (2) Thirty-nine per cent prefer service immediately following internship, 15 per cent would rather have it after two years of hospital training, and 46 per cent would rather wait until they complete full residency training.

CONGRESS GETS REPORT ON NURSE PROBLEM

The nurse shortage in the U. S. is acute, and remedial action is urgently needed, Representative Frances Bolton (R., Ohio) has informed Congress. Her findings were reported to the House as a result of a poll sent to 10,000 nurses, physicians, hospital administrators, state and federal officials and other interested laymen. Mrs. Bolton introduced a bill early in the last session for a federal program of grants for graduate nurse training and practical nurse training. The American Medical Association, in testimony to the House Commerce Committee, reiterated support of one-time renovation grants to nursing schools on a matching basis and grants to states for advanced nursing scholarships.

Mrs. Bolton listed these findings, among others, in her report to the House: 1. Nurse shortage is most critical in general and private-duty nursing, followed by teaching, supervision and administration categories; 2. low pay and long and irregular hours are major factors in the shortage; 3. more funds to nursing schools should remedy the shortage; and 4. a program of state-administered, federal-state matching funds is the preferred approach to the problem.

IMPROVED SOYA FORMULA MARKETED

A new infant formula product designed to provide for better nutritional management of allergic and potentially allergic infants was marketed by Mead Johnson and Company in March. The company indicated that the new product, Liquid Sobee, is a balanced soya formula differing from soybean substitutes for milk in that no carbohydrate needs be added to it. The caloric distribution is based on authoritatively recommended proportions, and vitamins A and D are incorporated in the product. The processing method is said to retain natural B vitamins present in soybeans at high levels, and clinical studies on both normal and allergic infants reveal that the product is exceptionally well tolerated. Evaluation studies on infants as well as experiments with animals are reported to have shown that growth curves with Liquid Sobee will be comparable to growth produced by cow's milk and definitely greater than those obtained with other soybean products used for infant feeding.



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Dramamine (brand of dimenhydrinate) is available in tablets of 50 mg. each; liquid containing 12.5 mg. per 4 cc. Dramamine is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. G. D. Searle & Co., Research in the Service of Medicine.

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Starting Dates

SURGERY—Surgical Technic, Two Weeks, April 19, May 3, May 17

Surgical Technic, Surgical Anatomy & Clinical Surgery, Four Weeks, June 7

Surgical Anatomy & Clinical Surgery, Two Weeks, June 21

Surgery of Colon & Rectum, One Week, May 10

Thoracic Surgery, One Week, June 7

Esophageal Surgery, One Week, June 14

General Surgery, Two Weeks, April 26, July 26

Fractures & Traumatic Surgery, Two Weeks, June 7

GYNECOLOGY and OBSTETRICS—Gynecology Course, Two Weeks, June 7

Vaginal Approach to Pelvic Surgery, One Week, May 24

Combined Course in Gynecology & Obstetrics, Three Weeks, April 19

MEDICINE—Two-Week Course May 3

Electrocardiography & Heart Disease, Two Weeks, July 12

Gastroenterology, Two Weeks, May 17

Hematology, One Week, June 14

DERMATOLOGY—Two-Week Course May 10

PEDIATRICS—Congenital & Rheumatic Heart Disease in Infants & Children, One Week, April 19 and April 26

Cerebral Palsy, Two Weeks, June 14

UROLOGY—Two-Week Course April 19

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Locum Tenens Available

Several young physicians are anxious to serve as locum tenens during the summer months. Any physician wishing someone to take over his practice temporarily is asked to list himself with the Physician Placement Bureau.

The Bureau also wishes to find openings for the following specialists desiring a location in Iowa.

- 8 Surgeons
- 6 internists
- 4 obstetricians and gynecologists
- 1 radiologist
- 2 dermatologists
- 2 urologists
- 4 pediatricians
- 3 orthopedists

Members who know of locations for any of these young physicians are asked to write the Physician Placement Bureau, Miss Mary L. McCord, 529 36th Street, Des Moines 12.

The Month in Washington

Washington, D. C.—Just about a year ago the Hill-Burton hospital construction program was under heavy attack in the House Appropriations Committee. But the damage was not permanent. The program has made a complete recovery. More than that, Congress shows every intention of doubling the appropriation for the program, but earmarking the additional money for grants to diagnostic and treatment centers, rehabilitation facilities, hospitals for the chronically ill, and nursing homes. At this stage the legislation to stimulate health facility construction is believed to be closer to enactment than any other major health project of the Eisenhower administration. Although the main objectives have not been altered, some significant changes were made in the bill by the House Interstate and Foreign Commerce Committee in two weeks of intensive work at closed-door sessions. Then, in mid-March, the Senate committee took up the bill and considered additional amendments.

Most changes are designed to tighten up eligibility for grants. For example, money could go to only two types of diagnostic or treatment centers, those operated by and for a governmental unit or by a group that also operates a nonprofit hospital. Nor would centers or nursing homes be eligible unless under medical supervision or operated by an association that also operates a hospital.

Another change written into the bill would rule out a project if it were not to be open for full and unrestricted use by the general public. Thus labor union, fraternal, and prepayment health plans could not benefit if they offered their own subscribers any advantage in service at the center or hospital.

On the financial side, several amendments have been tentatively adopted. One would allow states to use the original Hill-Burton formula for apportioning money among projects, or to accept a flat 50 per cent federal contribution. (As in the original Hill-Burton act, the poorer states would be allocated more per capita.) States would be allowed to pool their allocations for construction of interstate facilities, and the United States would be authorized to recover its proportionate share of a project if at any time the project were converted to profit use or were transferred to interests which for any other reason would not be eligible.

Of major interest to the medical profession, although not far along on its legislative course, is the administration's proposal for subsidizing pre-paid health plans for federal civilian employees. The U. S. would pay a maximum of \$26 per year, to be matched by the employee, for the purchase



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35-605—Anti-A, B (Group O) Blood Grouping Serum, 5 cc.	Each 2.50
32-102—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 2 cc.	Each 3.25
32-105—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 5 cc.	Each 7.50

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50-100—Physiological Salt Solution, 100 cc.	Case of 100 35.00
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of any type of prepaid insurance. Any cost above \$52 per year would have to be borne entirely by the employee.

As a part of the program, the administration is proposing that payroll deductions be authorized, a concession the insurance and prepayment insurance organizations have been urging for years. Currently federal executives differ on whether payroll deductions would be "legal," but none is willing to risk authorizing deductions in the absence of specific approval from Congress.

Still following a slow and controversial course is the administration's proposal for reinsurance of health plans. Early in the session—with the ardent support of Chairman Charles S. Wolverton of the key House committee—this legislation appeared pointed toward enactment. However, the Department of Health, Education, and Welfare was not satisfied with Mr. Wolverton's bill and decided to draft one of its own. The drafting consumed many weeks—time that may prove fatal with a Congress hoping to adjourn early for the fall elections.

The Defense Department, made uncomfortable by a few suspected subversive physicians and dentists it doesn't quite know what to do with, is asking for an amendment to the Doctor Draft act. The department's problem is this: The most recent Court of Appeals decision holds that physicians or dentists drafted or called up from the reserves must, under the Doctor Draft act, either be commissioned or discharged. So, technically, a man who refuses to fill out his loyalty questionnaire would be rewarded by a release. To correct the situation, the Department is asking that the law be changed to allow it to withhold a commission from a loyalty suspect, yet keep him on duty for the specified time in noncommissioned status and assigned to professional duties.

The American Medical Association is continuing its support of Senator Bricker and others who are convinced they still can enact a resolution calling for an amendment to restrict international agreements. The Association's position is that unless a safeguard is written into the Constitution, future international agreements could impose on the country social and medical care programs that Congress itself would not approve.

INTERNATIONAL ACADEMY OF PROCTOLOGY

All physicians are cordially invited to attend the Sixth Annual Convention of the International Academy of Proctology, at the Palmer House, Chicago, April 8, 9, 10 and 11, 1954. There is no fee for attendance.

Because general practitioners face proctological problems daily, much of the program has been planned to answer their questions.

The program can be had on request from the Executive Office of the Academy, 43-55 Kissena Boulevard, Flushing, New York.

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ST. LOUIS CLINICAL MEETING, DEC. 1-4



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PERSONALS

Dr. Pierre Sartor, of Titonka, 1953 General Practitioner of the Year, suffered several broken ribs when a car in which he was riding skidded on an icy road and overturned, near Garner on February 8.

Dr. Louis E. Harrington, a graduate of Loras College, Dubuque, and of the Wayne University Medical School, Detroit, opened an office for general practice at Danbury on February 15. He interned at Fitzsimons Army Hospital, Denver, and served a year's residency there, as well.

Following three years as chief of surgery at the Des Moines V.A. Hospital, **Dr. G. Travis Westly** has associated himself with **Dr. C. B. Tice**, **Dr. George I. Tice** and **Dr. L. J. Kirkham**, at Mason City. Dr. Westly is a 1943 graduate of the College of Medicine at S.U.I. and is a diplomate of the American Board of Surgery.

Dr. W. J. Brunner, of Akron, suffered a severe stroke early in February, while on a trip in Texas. He was brought home by plane a few days later. Dr. Brunner retired from practice about a year ago.

Doctor John B. Gregg will leave his post as Chief of Otolaryngology at the U. S. Veterans Hospital, and Instructor in Otolaryngology at the

University Hospitals in Iowa City in April to continue the practice of his father, Doctor John B. Gregg of Sioux Falls, South Dakota, who died recently.

The Federation of State Medical Boards has reelected **Dr. Walter L. Bierring**, of Des Moines, its secretary-treasurer for the fortieth year. Dr. Bierring, after leaving the office of Commissioner of Health last July, has continued with the Department as head of its Division of Gerontology.

Dr. John W. Eckstein, formerly of Ryan and a Rockefeller fellow at the College of Medicine of S.U.I. during the past year, has been awarded a postdoctoral fellowship for preoperative and postoperative study and evaluation of surgical results in patients with congenital heart disease. He will continue to work at the University's Cardiovascular Laboratory, under the direction of **Dr. J. W. Culbertson**. The grant was made by the National Heart Institute.

Beginning August 1, 1954, **Dr. George N. Bedell**, an associate in surgery at University Hospitals, Iowa City, is to have a special research fellowship from the National Heart Institute for work in respiratory physiology as it relates to heart disease. He will undertake his project at the graduate school of the University of Pennsylvania.

NOT ARTHRITIS BUT ARTHRALGIA...

If the patient complaining of aching joints is a woman between 37 and 54 years of age, it is highly possible that she is suffering from arthralgia rather than arthritis.¹ It has been estimated that arthralgia occurs in about 40 per cent of women with estrogen deficiency, and is exceeded in frequency only by symptoms of emotional or vasomotor origin.² In fact, arthralgia may be as indicative of declining ovarian function as the classic menopausal hot flushes.

Arthralgia, however, is just one of a vast number of distressing but ill-defined symptoms that may be precipitated by the loss of estrogen as a "metabolic regulator." Other good examples are insomnia, headache, easy fatigability, and tachypnea.

Because these symptoms sometimes occur years before or even long after cessation of menstruation, they are not always readily associated with estrogen deficiency, and the tendency may be to treat them with medications other than estrogen. Obviously, sedatives and other palliatives cannot be expected to produce a satisfactory response if an estrogen deficiency exists. Only estrogen replacement therapy will correct the basic cause of the disorder.

"Premarin" is an excellent preparation for the replacement of body estrogen. In "Premarin" all components of the complete equine estrogen-complex are meticulously preserved in their natural form. "Premarin" produces not only prompt symptomatic relief but a distinctive "sense of well-being" which is most gratifying to the patient.

1. Greenblatt, R. B., and Kupperman, H. S.: *M. Clin. North America* 30:576 (May) 1946. 2. McGavack, T. H., in Goldzieher, M. A., and Goldzieher, J. W.: *Endocrine Treatment in General Practice*, New York, Springer Publishing Company, Inc., 1953, p. 225.

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Officers of the Sioux Valley Medical Society elected at the meeting held in Sioux City late in February are: **Dr. R. E. Bray**, Ponca, Nebraska, president; **Dr. W. L. Downing**, Le Mars, vice-president; **Dr. E. H. Sibley**, Sioux City, secretary; and **Dr. Arnold K. Myrabe**, Sioux Falls, South Dakota, treasurer.

Dr. M. O. Stauch has announced that hereafter he will divide his attention between practices in Moorhead and Soldier. He will maintain half-day schedules of office hours in both towns.

Medical Associates, of Dubuque, have announced the association of **Dr. Herbert L. Glass**, a pediatrician.

Dr. C. B. Rogers, a Life Member of the Iowa State Medical Society, observed the 55th anniversary of his beginning practice in Earlville, on February 6.

NEW PROPOSALS FOR FEDERAL LAWS

ADMINISTRATION REINSURANCE BILLS

On March 11, Senator Smith and Representative Wolverton introduced identical bills (S.3114 and H.R.8356) which constitute the administration's program for reinsuring voluntary prepayment plans for medical and hospital costs. The authors contend that their proposals will deliver the coup de grace to socialized medicine.

It confers great responsibility upon the Secretary of the Department of Health, Education and Welfare, for though it provides for a 12-member board to administer the proposed loan fund, the personnel would act only in an advisory capacity and would serve only during her pleasure. Eligibility for reinsurance protection would be extended to virtually every type of plan, provided it is based on prepayment and has a financial structure and schedule of benefits that are adjudged sound. Especially welcome will be those plans designed to extend the prepayment method to geographic areas where it is at present unavailable or inadequate.

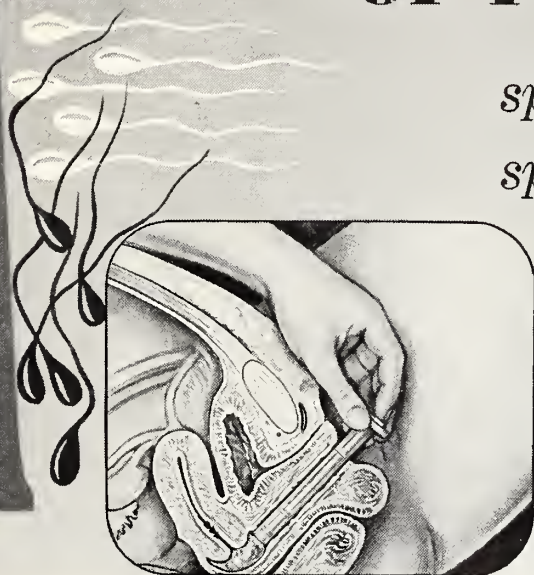
A corporation carrying federal reinsurance on a given type of prepayment plan would be protected on 75 per cent of its loss for the year. Example: Company X has premium income of \$10,000,000, of which 10 per cent goes for allowable administrative expenses and \$500,000 for contingencies and profits. Anticipated benefit payments are \$8,500,000. But they actually come to \$15,000,000. The company absorbs \$8,500,000 plus the \$500,000 contingency reserve plus $\frac{1}{8}$ of \$1,000,000 (administrative costs), or a total of \$9,125,000. When one subtracts that amount from the actual benefit payments, \$15,000,000, he has a remainder of \$5,875,000. The

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*Active agent, dodecaethyleneglycol monolaurate 5%, in a base of long-lasting barrier effectiveness. 1. Gamble, C. J.: Report to Council on Pharmacy & Chemistry, A.M.A.: J.A.M.A. 153:1019, 1953.

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government, under the proposed scheme, would meet 75 per cent of that figure, or \$4,406,250. The formulas for determining the administrative-expense allowances and their ratios to earned-premium income would not be applicable to participants (such as cooperative plans) which furnish health services direct. The Secretary of HEW would be empowered to make special regulations in such cases relative to the obligations of the carrier as co-insurer.

The administration's reinsurance plan incorporates a number of features designed as safeguards. First, federal reinsurance is barred in cases where it is obtainable from private sources for comparable rates and terms. Second, supervisory or regulatory power over the plans and over the institutions with which the plans do business is expressly denied to the federal government. In the cases of carriers that provide medical or dental service, as distinguished from indemnity payments, the law would require that control over the professional services was vested solely in licensed members of the professions involved.

Reinsurance would be wholly voluntary. The sizes of premium payments would vary widely, being, in most cases, a percentage of the carrier's premium income. The initial working capital of the fund would be \$25,000,000, repayable to the U. S. Treasury. If voted by Congress, the program would become effective July 1, 1954.

AMA TAKES STAND ON OTHER BILLS

Following is an abbreviated summary of action taken by the Board of Trustees of the American Medical Association on proposed federal legislation, including bills introduced so far this session. The board acted on recommendations of the Committee on Legislation, reached at committee meetings held on December 3, 1953, and February 14, 1954.

H.R.6863 (Curtis, Nebr.) To make social security coverage under the Old-Age and Survivors Insurance Program compulsory for certain self-employed persons, including physicians.

Active Opposition to that provision of the bill proposing compulsory inclusion of physicians. No opposition, however, to voluntary coverage.

H.R.7199 (Reed, N.Y.) The administration's bill to increase social-security taxes and benefits and expand compulsory coverage to include physicians and other self-employed persons.

Active Opposition only to the portion of the bill which includes physicians on a compulsory basis.

S.2579 (Smith, N.J.) To improve and extend vocational rehabilitation grants and services.

Approval in principle. The Board withheld any action until the bill can receive additional study and the effects of its provisions can be foreseen.

S.2145 (Humphrey, Minn.) Vocational rehabilitation for mentally afflicted.

Opposition because the purpose of the bill is not clear and because it apparently is in conflict with existing law.

H.R.6950 (Wolverton) Providing \$40,000,000 over five

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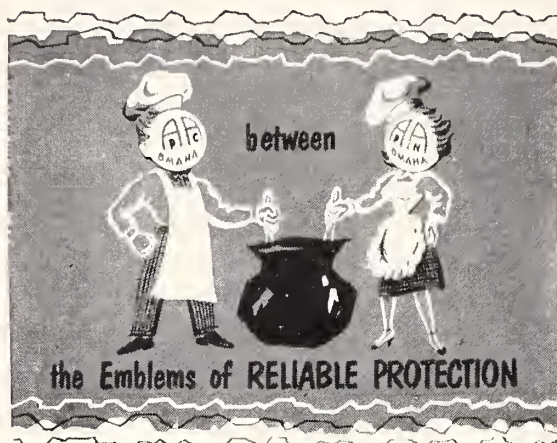
Josef A. Kindwall, M.D.
Carroll W. Osgood, M.D.
William T. Kradwell, M.D.
Benjamin A. Ruskin, M.D.
Lewis Danziger, M.D.
Russell C. Morrison, M.D.
James A. Alston, M.D.

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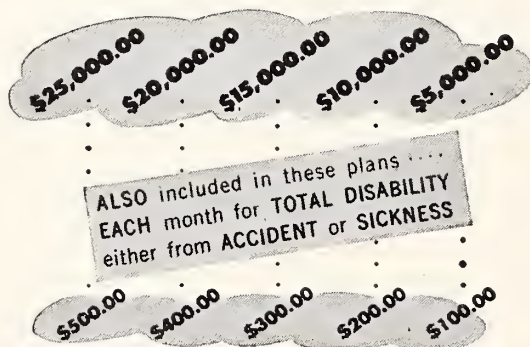
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years for long-term loans to voluntary, non-profit health associations to obtain facilities and equipment.

Active Opposition, for the loans can be had privately, thereby eliminating occasion for federal intrusion in the financing of private medical work.

H.R.6951 (Wolverton) To amend Public Health Service Act to provide federal mortgage-loan insurance for medical facilities, favoring voluntary prepayment health plans.

Active Opposition because the program would be completely federally controlled and would amount to class legislation, for there would be no state surveys nor state participation.

H.R.7700 (Wolverton) To provide federal mortgage-loan insurance for medical facilities favoring prepayment health plans. Supersedes H.R.6951.

Active Opposition for the same reasons.

S.2758 (Smith, N.J.) H.R. 7341 (Wolverton) Amends Hospital Survey and Construction Act and authorizes \$182,000,000 in the next three years for certain medical facilities.

Approval of general principles. *Action withheld* pending clarification of certain controversial points.

S.2778 (Smith, N.J.) H.R. 7397 (Wolverton) To improve and extend public health service grants, making better use of federal funds.

Approved in principle.

H.R.7817 (Martin, Iowa) Permitting sale of certain narcotic drugs on an oral prescription.

Active Support.

H.R.7914 (Poff) To grant a federal charter to the National Fund for Medical Education.

Approval in principle. This bill differs from S.1748 in that it adds four physicians to the Fund's board of trustees and emphasizes that money can be raised only from private sources.

H.Res.286 (Metcalf) Authorizes a House committee study of means of controlling and preventing silicosis.

No Action because existing government agencies are well equipped to handle silicosis problems.

H.R.6949 (Wolverton) To reinsure health plans.

Mr. Wolverton said this bill was introduced for "discussion" purposes; spokesmen for the administration have said it is not the administration bill.

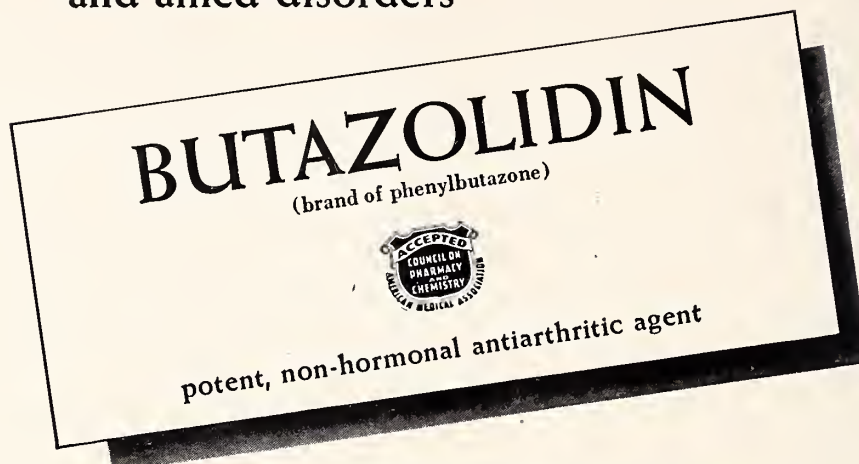
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Arnold, K. E., Sioux City
(Port Hueneme, Calif.) Lt. (j.g.), U.S.N.R.
Bartholomew, R. D., Lake City
(Walnut Creek, Calif.)Lt. (j.g.), U.S.N.R.
Benton, J. S., Des Moines.....1st. Lt., A.U.S.
Bogle, W. C., Marion
(Great Lakes, Ill.)Lt., U.S.N.R.
Braatlien, N. T., Des Moines
(Rock Island, Ill.) 1st Lt., U.S.A.F.
Brennan, J. E., Des Moines
(Camp Pendleton, Calif.)Lt., U.S.N.R.

- Broman, J. A., Maquoketa
(Ft. Sill, Okla.) Capt., A.U.S.
- Buzan, E. F., Des Moines
(Yuma, Arizona)
- Christensen, J. R., Eagle Grove
(Palo Alto, California) Lt. A.U.S.
- Cline, H. L., Iowa City
(Denver, Colorado) A.U.S.
- Couchman, P. G., Des Moines
(Ft. Riley, Kansas) 1st Lt., U.S.A.F.
- Daut, R. V., Davenport
(Westover Field, Massachusetts) Capt., U.S.A.F.
- Davidson, M. C., Emmetsburg
(El Paso, Tex.) Col., A.U.S.
- Dooly, J. E., Fort Dodge
(Pleasanton, Calif.) Capt., U.S.A.F.
- Dunseth, W. R., Kellogg
(APO San Francisco, Calif.) USAF
- Eckhardt, R. D., Iowa City
(Portsmouth, Virginia) Lt., U.S.N.R.
- Ehmke, Bruce C., Iowa City
(Hot Springs, Arkansas) 1st Lt., A.U.S.
- Field, C. A., Cresco
(DeRidder, Louisiana) Capt., A.U.S.
- Garred, J. L., Whiting
(San Francisco, Calif.) Lt., U.S.N.R.
- Garred, W. P., Dow City
(San Francisco, Calif.) Lt. (j.g.), U.S.N.R.
- Giles, Francis E., Cresco
(Fort Bragg, North Carolina) A.U.S.
- Godbey, M. E., Mt. Pleasant
(A.P.O. 862, New York City) Capt. U.S.A.F.
- Gottsch, John E., Shenandoah
(MacDill A.F.B., Tampa, Florida) Capt. U.S.A.F.
- Gottsch, Joseph C., Shenandoah
(Randolph A.F.B., Texas) 1st Lt., U.S.A.F.
- Haskell, J. G., Reinbeck
- Hickman, D. M., Indianola
(Alexandria, Louisiana) 1st Lt., U.S.A.F.
- Isham, R. B., Osage U.S.N.R.
- Iwen, G. W., Iowa City
- Jenkins, H. F., Ogden
(Randolph A.F.B., Texas) U.S.A.F.
- Johnson, A. A., Jr., Council Bluffs
(Fort Worth, Texas) Capt., U.S.A.F.
- Johnson, M. H., Iowa City
(APO New York, N. Y.) Capt., A.U.S.
- Johnson, W. A., Emmetsburg
(Corona, California) Lt., U.S.N.R.
- Judiesch, K. J., Iowa City
(Ft. Sam Houston, Tex.) 1st Lt., A.U.S.
- Kenney, B. E., Woodbine
(Raleigh, North Carolina) 1st Lt., U.S.A.F.
- Kruse, R. H., Conrad
(Pearl Harbor, T. H.) Lt., U.S.N.R.
- Kuehn, W. G., Clarinda
(A.P.O. San Francisco, Calif.) Lt., U.S.N.R.
- Kuehnle, G. R., Dubuque
(Baton Rouge, La.)
- Kurth, R. J., Waterloo
(Minneapolis, Minn.) Capt., U.S.A.F.
- Larson, Erling, Jr., Des Moines
(Indianapolis, Indiana) Lt., U.S.N.R.
- Lawler, Matthew P., Des Moines
(Corona, California) U.S.N.
- Leiter, E. R. K., Des Moines
(Bangor, Me.) Capt., U.S.A.F.
- McMahon, A. E., Jr., Des Moines
(Omaha, Nebraska) U.S.N.R.
- Martins, J. K., Waterloo
(Bayonne, N. J.) Lt., U.S.N.R.
- Maxwell, J. R., Iowa City
(Camp Stoneman, California) 1st Lt., A.U.S.
- Middleton, W. H., Central City
(Bethesda, Maryland) U.S.N.R.
- Montgomery, A. E., Jefferson
(Phoenixville, Pa.) Lt. Col., A.U.S.
- Nielsen, G. E., Des Moines
(Topeka, Kan.) 1st Lt., U.S.A.F.
- Paul, R. E., Des Moines
(FPO San Francisco, Calif.) Lt., U.S.N.R.
- Perman, Harvey H., Forest City
(Yokasuka, Japan) U.S.N.
- Peterson, L. G., Holstein
(Camp Kilmer, N. J.) A.U.S.
- Pfaff, R. A., Dubuque
(Camp Pendleton, Calif.) Lt., U.S.N.R.
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- Prendergast, L. J., Iowa City
(Oceanside, California) U.S.N.R.
- Province, Wm., Jr., Dubuque
(Long Beach, Calif.) U.S.N.R.
- Puntenney, A. W., Boone
(Portsmouth, Va.) Lt., U.S.N.R.
- Rhode, M. C., Iowa City
(Philadelphia, Pa.)
- Rogers, Edward A., Anamosa (U.S.P.H.S. Hospital,
Seattle)
- Saunders, R. J., Colfax
(APO San Francisco, Calif.) 1st Lt., U.S.A.F.
- Schlichtemeier, E. O., Peterson
(FPO San Francisco, Calif.) Lt., U.S.N.R.
- Shaffer, F. J., Iowa City Col., U.S.A.F.
- Shuldberg, Arthur, Des Moines
(Gunter AFB, Ala.) 1st Lt., U.S.A.F.
- Sinton, D. W., Iowa City
(Colorado Springs, Colorado) A.U.S.
- Smith, C. B., Iowa City
(Bowling Green, Ky.) Capt., A.U.S.
- Sphonheimer, L. N., Donnellson
(Mountain Home AFB, Idaho) 1st Lt., U.S.A.F.
- Stivers, T. W., Des Moines
(Hutchinson, Kansas) Lt. (jg) U.S.N.R.
- Sugioka, Kenneth, Iowa City
(Long Island, N. Y.) A.U.S.
- Theilen, E. O., Iowa City
(Washington, D. C.) Capt. A.U.S.
- Thompson, J. W., Ames
(Camp Breckinridge, Kentucky) Capt., A.U.S.
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- von Lackum, L. S., Oelwein
(Great Lakes, Ill.) Lt., U.S.N.R.
- Voorhees, P. H., Ottumwa
(Jamaica, N. Y.) U.S.N.R.
- Wall, J. M., Boone
(Gunter AFB, Ala.) 1st Lt., U.S.A.F.
- Walker, J. R., Waterloo
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- Wilson, Robert G., Missouri Valley
(San Antonio, Texas) Flight Surgeon
- Witte, H. J., Marathon
(San Francisco, Calif.) Lt. Col., A.U.S.
- Young, R. A., Clarion
(Ft. Sam Houston, Tex.) Capt., A.U.S.
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The JOURNAL

of the

Iowa State Medical Society

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Vol. XLIV

DES MOINES, IOWA, MAY, 1954

No. 5

President's Address

ROBERT N. LARIMER, M.D.

SIOUX CITY

IT IS ONLY PROPER for the retiring president of this Society to acknowledge his debt to the many people who have contributed their efforts and ability during his term of office, and I wish to make that acknowledgement as the first portion of these remarks. In an organization such as the Iowa State Medical Society has become, it is quite impossible for a president to accomplish, in person, those things which he actually should do. He could spend at least a part of each day in attending to the affairs of the Society.

A recapitulation shows that during the past year I have spent more than fifty days away from Sioux City on Medical Society affairs, and sometime during January, the first 500 sheets of official letterheads had been used up in correspondence. This is but another way of saying that the conduct of the many affairs of the Society must be considerably divided, as in fact they are. The Society owes a debt of gratitude to the many doctors who sat on various committees, to the Council, and to the other officers. The office staff, none of whom work on the familiar 40-hour-week plan, deserves special mention. During most of this year I was fortunate in having the help and advice of Dr. Bernard, and to him, also, I want to acknowledge my debt. I wish to thank all of these people collectively for the work which they have done, and particularly in relation to some of the statements which I shall make later.

There is another introductory statement which should be made. It would seem that at present we are living in chaotic medical times. This is not true so far as the care of the sick is concerned. There can be no doubt that the morbidity and mortality from illness is less in the United States, and in Iowa, than ever before. Each year there is statistical evidence to show better control of infection, decreasing mortality from disease, and the

development of an aging population. Obviously, doctors are doing a better job for their patients than at any time since civilization began. Why is it, then, that there are so many problems which bother and strain the doctor-patient relationship, or the relationship between doctors themselves?

I am sure that the House of Delegates in its meeting yesterday debated several problems in a serious fashion. Medical societies have always been concerned about ethics, about the hospital-doctor relationship, about the problems posed by the various cults, about medical education and postgraduate education. In general they have solved these problems as they have arisen. But now the medical profession finds itself being attacked by Congressional committees, by groups of doctors organized for scientific purposes which have conducted campaigns in lay magazines in support of the thesis that patients should be suspicious of their doctors, particularly if they are not members of that particular society. We even find ourselves being attacked by an insurance company which we, ourselves, helped to develop. One wonders whether there may not be some common cause or prime factors which doctors have overlooked in the past from which these and other problems have developed. I believe that there is an answer to this question and that we have ignored prime factors in the problem.

Prime factors are apt to be simple numbers, and, indeed, the facts which we have overlooked are really very simple. I believe that the common denominator which we have overlooked is that doctors have become too busy to control their own destinies. This observation is not original with me, since it has been expressed by Dr. McCormick, the President of the American Medical Association, and by other men on down. Too often doctors feel that by doing good work for their

patients they are making the only contribution necessary to protect Medicine from outside attack. They believe their own positions secure because presently their office is full of patients and they are busy. They choose to ignore the organized efforts being made to place the doctor in some sort of secondary position. One could say this same thing in different ways, but I am forced to conclude that the doctor himself must become active in protecting himself.

The first prime factor in our various problems has been the development of lay personnel to carry on those things which the doctor, himself, should have been doing. Too often, as the lay person has developed in his position, he has taken over from the doctor the determination of policies which affect only the doctor and his patient.

If one can accept the idea that a prime factor of the present chaos in medicine is caused by the development of lay personnel who are attempting to determine medical policies, then there is another qualifying paragraph which should be included. I wish to make it plain that we in the Iowa State Medical Society are very fortunate in the lay people who are concerned with the activities of our Society. Whether you have noticed it or not, through the years your Society has developed lay personnel who have acquired the medical viewpoint as they have gradually attained their positions, and therefore I must make it plain that I am not referring to them or to their type of person.

One can explore another prime factor. I am referring to the type of individual who has become overly interested in the doctor-patient relationship. I call them "the builders." This individual may be a politician; he may be a well-meaning individual with a sympathy for the sick who has become interested in some organization or another which overemphasizes the medical care of a certain disease; he may be a social worker, who in an endeavor to expand his own position, is not too careful in his approach to the physician and his relationship to the patient; or he may be a professional reformer—some of whom may even have medical degrees. All of these people know that they can most easily sell their programs if they include medical care, and they ignore the doctor who is to give that medical care.

It would seem to me that there is something that we can do to protect ourselves from these outside influences. This answer is very simple. It is the formation of a stronger and more active organization within the framework which we already have. Every doctor must be active in his local society and help it to be of service in the improving of every sort of medical care. The State Society must be active at its level, and the American Medical Association must actually do those things which we expect it to do to protect the interests of each of us. This thinking is based on the idea that all of the many medical societies, aside from those which were specifically men-

tioned, should be thought of only as splinter groups within organized medicine. Splinter groups may have appeals along scientific lines or even political lines to their members alone, but they should never place themselves in a position of trying to dominate or speak for organized medicine. If you consider this statement, I think you can see that a great deal of the chaos of our present situation has been developed by individuals, or splinter societies, who are not actually representing organized medicine. We must protect ourselves against such groups.

This belief in the necessity and value of organized medicine is an old idea to all of you, but it has raised two questions in my mind many times in the past year. These questions are "What is the function of a medical society and its officers?" and second—"What is the obligation of the physician to his medical society?" I shall try to answer these questions to you as I have answered them to myself. As I am doing so, perhaps the answers can be correlated with the weaknesses which I have mentioned before.

In regard to the question relating to the activities of a medical society, its officers, and its relation to society in general, the one conclusion which I have reached over and over again in thinking about this problem is that in Medicine, with its many facets, whether at the bedside, in the operating room, in the class room, in the research laboratory, or even in medical organizations, the doctor is the unit. By this I mean that in every instance a single doctor with his qualifications of training, judgment, ethics, curiosity, moral sense, and so on, must eventually solve some given problem. If this is true, then each member of every medical society is important. His opinions and his judgments may eventually be those of the entire group. The same may be said of ethics or morals. They must start from the single person. It would seem to me that doctors in general, then, should be very jealous of their positions as individuals in their communities, and this jealousy and this right of self determination should extend to the highest point of medical organization, whatever that may be.

At present one wonders if policies are not developed for the most part at the top and are extended downward, rather than started in the most ordinary county medical society and then carried through the chain of command to the officers of the American Medical Association. It is proper that an army should have a chain of command from the general down to the lowest private, but, to me, a democratic medical society should run in exactly the opposite direction, namely, from the individual doctor up through the organization to the top. It would then follow, in my mind, that most policies of organizations should be formulated and implemented at the level on which they originally develop. One of the criticisms of the New Deal, and the reason for which many people feared it, was the centralization of power and the rule by bu-

reaucratic method rather than by law. One wonders if the very thing which most doctors voted against in the last presidential election has not been going on in the politics of our own medical organizations. We must constantly watch for, and protect ourselves against, any sort of centralization of power, and we must be careful to avoid the giving of power, or losing of power, to a central organization when we ourselves might more properly make our own decisions and carry them through to their logical conclusions. It might even be possible that we could reclaim some of the general powers which we are losing or have lost. Only the broadest policies should be determined by the American Medical Association, and it would seem to me that the national organization might well withdraw from the consideration of problems in which state societies or even geographic groups differ from one another. Rules laid down on a national level must be extremely flexible, rather than rigid, and at this level only the broadest criteria, such as the general welfare of patients or of doctors, should be observed. These policies should always allow for state or even local interpretation. Obviously what might be applicable to an Eastern urban center might not have any appeal or reason in the Middle West. We know that in the East doctors feel that we are provincial, while we, in this area, feel that medically we are quite as capable as any other group. This same local pride must be present in other areas over the entire country.

I believe the same sort of reasoning must prevail in the state medical organization. The State Society should make general rules, but these must be flexible and must allow for local interpretation. Any rule or plan which is concerned largely with an individual doctor and his individual practice should be worked out on a local level by a doctor and his medical peers. Courts of law recognize this principle in malpractice suits, since the general rule is that a man's procedures are judged largely by local standards. It is only when the problem is of general interest to the doctors of an entire state that the State Society should recognize and attempt to solve the problem. The State Society must be able to protect itself from attack at a local level, but, if possible, it should use the local organization for that protection. It follows, then, that the local county medical society is most important, and it should be allowed to stand alone as much as possible. Likewise, if my belief in the individual doctor is correct, it should follow that he must be willing to assume his responsibility locally and to the organized medical societies in general. Actually and in fact, the majority of doctors do this very thing.

In the Iowa State Medical Society, activity on the various committees has proved to be the answer to this problem. There are more and more medical men spending more and more time attempting to solve medical and medical-social problems by working through the State Society. Dur-

ing the past year, there has not been a single doctor called upon to do work who has failed to signify his willingness to cooperate. There has been some criticism because the same men have continued to work on committees or to serve as officers over a period of time, but the answer is that a doctor becomes interested in a certain problem and so becomes willing and anxious to continue his work. The results are possibly more valuable because of his experience. In the appointing of committees, I do not believe that anyone has been purposely ignored. If certain areas or individuals have been passed by, it is largely because their abilities have not been recognized by the officers. It is true that a certain stability in the organization results when men work for more than one year on a certain committee, and the Society benefits in still other ways from the continuing efforts of these men. Since the officers of the Society are looking for men who are willing and anxious to work, they won't lose much time in finding jobs for those who wish them.

One of the great problems of the State Society is to keep the individual doctor informed of the policies and activities of the state group. Efforts have been made to include as large an amount of material as there is space for in the state JOURNAL, and doctors have been urged to read it. The same can also be said for the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, which each week has departments of medical-political interest. We have tried direct mailing to doctors. During the past year the Society has attempted to poll our group by questionnaires. This is certainly democracy in our Society. However, it seems that only about a third of the doctors are willing to take the time to consider the questions and mail their answers to the State Society. One of the most heartening results of this questionnaire method has been the general agreement of most doctors on a given question. It would seem that most of us have about the same critical and emotional reactions.

On a recent television program the editor of the NEW YORK TIMES, Mr. A. H. Sulzberger, was asked to define the duty and province of a free press in a democracy. He replied, "The free press is something which is written into the Constitution of our land and which most of our people understand the importance of. The chief problem . . . is to take the free press and mold it into a responsible press. By a responsible press I mean one which gives the news objectively, presents all sides without regard to any party, sect or interest, and which, no matter what our editorial opinion may be, admits that its news columns lie in the public domain. The problems . . . are great because, in my judgment, democracy can only preserve itself if the people of the democracy are well and truly informed. That . . . is the chief responsibility of all of the many persons helping to get out the NEW YORK TIMES."

One can paraphrase Mr. Sulzberger's statement by saying that the responsibility of a medical soci-

ety, if democratic, is to inform its members, and then to reflect and activate their thinking. The officers should attempt only to interpret and implement the wishes and desires of the members, but must not initiate the thinking for the members of the organization.

One hears, over and over again, that the American Medical Association is democratic in its organization and workings. One wonders if this is true, and perhaps you wonder whether the State Society organization, itself, is democratic. I can speak only from my own experience with the latter group, and in doing so, perhaps I can bring some of my own philosophy of the organization to you.

I believe the opinion of every member of this organization is important and worthwhile. I believe he should be willing to express this opinion. Ideas, plans, and even policy may have their beginnings in the thinking of one man, but without action by the group, these benefits may be lost.

I believe the majority should rule in this organization. There can be but few questions on which all would agree, but in a democracy we have learned that there is a rule by majority. I believe that the State Society cannot possibly function as an integrated unit unless the county societies are functioning and are active. State Society officers must be developed from county society officers. There is no West Point for development of medical society officers. I believe that the American Medical Association, itself, if it is democratic in form, must be sensitive to the wishes and desires of any state society, just as the State Society is sensitive to the county society below it. I believe that the officers on any level of medical society organization should not, and cannot, make rules which the majority of the individual members on that level cannot agree upon. I believe that Medicine can go ahead if each of us will make his own contribution.

President Elect's Address

GERALD V. CAUGHLAN, M.D.

COUNCIL BLUFFS

A PRESIDENT-ELECT is chosen so that for a year he may prepare himself to assume the presidency with a good working knowledge of the operations of the Society, with an acquaintance with all the officers and committee members, and a general idea of the aims and interests of the Society, so that during his year in office as president he may effectively lead his Society forward to higher levels.

As the president-elect of the Iowa State Medical Society, I have conscientiously striven to prepare myself for the presidency. But as my term approaches I feel inadequate to meet the many challenges that are presented. I shall endeavor to enumerate these, to outline my views, and in a few cases to propose solutions to some of the problems that are before us.

The first one has to do with the separation of the professional services from the hospitals and placing those services in the hands of practicing physicians. Recently, at the request of the Iowa Board of Medical Examiners, the Attorney General rendered an opinion that hospitals are corporations and cannot practice medicine. In the same opinion he stated that for a physician to divide fees in any way, without the knowledge and consent of the patient or his guardian, constitutes unprofessional conduct, and a physician continuing to do so after the rendition of that opinion places his professional license in jeopardy. For these reasons, it becomes necessary for radiologists, pathologists, anesthesiologists and physiotherapists to enter into the practice of medicine in

these specialties on a fee basis and to perform their services in the hospital by renting the facilities and equipment in the hospitals so that this practice may be carried out. The Iowa State Medical Society must now take a stand insisting that the above-named changes be effected as soon as possible.

Another problem presenting itself is that of the osteopath. Again an opinion of the Attorney General is responsible for the consideration of the osteopathic problem in Iowa, for he has ruled that these osteopaths are legally eligible to practice in county hospitals in Iowa and no Board of Trustees of a county hospital can bar them from the use of hospital facilities for their patients. As everyone knows, there has been a committee on osteopaths in operation for two years in the American Medical Association, and a report was made at the American Medical Association meeting in June, 1953. No action was taken at that time, although the Reference Committee which considered the problem brought in majority and minority reports. The latter favored immediate action in recognizing the osteopaths, but the majority report prevailed, and action was deferred. In our state a very good committee headed by Dr. John Conner, of Nevada, has worked hard and, among other activities, has circularized the profession in Iowa in an effort to secure the views of individual physicians. Approximately one-third of the questionnaires have been returned. The committee report and the poll opinions have been reported to the House of Delegates, and the re-

sult of its deliberations will be available shortly.

Incidentally, during the past two years three questionnaires have been submitted to the membership of the Iowa State Medical Society regarding very important questions confronting the profession. To none of these has the response represented more than 40 per cent of the membership. Why physicians—alert, educated men—fail to vote on important questions is a mystery to everyone at Iowa State Medical headquarters. I would be amiss at this time if I did not chide the members for their indifference and failed to urge strongly that every member take a stand on the issues involved so that the officers and committees may have the benefit of his counsel. There is no question that doctors generally are well posted on civic affairs, on local affairs and on medical affairs, but their interest is normally in the communities in which they live, in their homes, in their families and in their own practices. For that reason they frequently neglect the work of organized medicine. It is most important that every doctor take an interest in organized medicine, that he promote organized medicine, and that he give sincere, active support to all the activities that promote the practice of medicine and make for good public relations, for we need good public relations. There is no question that on many sides there is evidence of forces which seek to destroy the private practice of medicine and to bring all physicians under government control. That is something we want to avoid, and it is something that doctors should combat by increasing the good will of the public toward the medical profession.

Another thing that has a tendency to promote socialized medicine is the Veterans' Administration care of non-service-connected disability cases. Tremendous hospitals have been built up, and there is a move on the part of veterans' organizations to keep them filled. It is attractive to an ex-service man to know that he can go to a hospital and obtain all of the medical services he needs for his illness at no cost to himself. However, he must be made clearly aware of the fact that if he does so he is accepting charity, that it is actually a dole. As Dr. McCormick, president of the American Medical Association, has said, there is no place in America for two classes of people. The veteran and the non-veteran constitute the citizenry of America, and they should go forward shoulder to shoulder with the same rights and the same privileges. Many of the doctors here are ex-service men. I do not think that any of them suppose they should get special favors from the government because of the fact that they had an opportunity to render patriotic service during times of stress for the nation. Certainly every citizen feels an obligation toward his government, and many of the people who were not in service would have been if they had been eligible for service. For that reason the physicians should encourage the veterans' organizations to see the necessity

of maintaining the economy of the country, and they should do this by joining the veterans' organizations and attempting to influence the thought of veterans generally, so that the taxpayers of the country will not have to pay a tremendous cost for the care of the non-service-connected cases in the hospitals.

Next, let me speak for a moment of charges that have been made regarding unethical practices. At times the medical profession is accused of fee-splitting, unnecessary surgery and ghost surgery. Such practices make headlines in the newspapers, and frequently they are repeated in magazine articles, such as appeared recently in *COLLIER'S* and the *SATURDAY EVENING POST*. One individual specifically mentioned Iowa as being a party to such misdeeds. I believe the great majority of Iowa physicians are honest and conscientious citizens. I believe that they treat their patients fairly and that they practice the Golden Rule. I would like to see Iowa physicians take a place in the vanguard of American medicine by being the first state group to go on record as agreeing to stamp out all irregular practices by throwing their books open to inspection at any time, so that certified public accountants can make certain that they are not engaged in any illegal fee-splitting. I think also that the hospitals in the state should be able to certify that the men who do surgery in their hospitals do not do ghost surgery or unnecessary surgery.

Nineteen hundred fifty-five will be a legislative year. There undoubtedly will be many legislative problems which we will have to face. How we meet them will depend upon our Legislative Committee, headed by Dr. Coleman. His committee will be supported of course by the Board of Trustees and by the officers of the Iowa State Medical Society, and if necessity arises at any time for support of the Iowa State Medical Society as a whole, a special meeting will be called of the Executive Council, or if the matter seems important enough, the House of Delegates as a whole will be convened.

I want especially, at this time, to speak of the marvelous organizational work done by Dr. R. D. Bernard during his three-year period as General Manager of the Iowa State Medical Society. He was most effective in reorganizing the Council and making it active, and his work with the various committees was outstanding. It was indeed a personal loss to me when he decided to retire at the end of 1953. I also want to pay tribute to all of the officers of the Society, particularly to the Board of Trustees, for they are tireless in working for the good of Iowa medicine. Dr. Ben Whitaker was an outstanding president, and the retiring president, Dr. Larimer, has been an able successor.

In conclusion I want to say that I will do everything that I can to give a good administration to the Iowa State Medical Society. We have a very efficient staff at headquarters, headed by Don

Taylor and Mary McCord, and I believe that we shall have a good year. I shall be loyal to the Society and its members, and I shall ask and expect the loyalty of the members in doing every-

thing possible to promote medicine in the State of Iowa and to give to the people of Iowa the care which a fine medical profession alone can give.

Dislocation of the Shoulder Joint and Infraction of the Humeral Head

ROBERT W. NEWMAN, M.D.*

IOWA CITY

It is NOT at all surprising that Hippocrates should have included dislocation of the shoulder among the subjects about which he wrote,¹ for in his day, as now, it undoubtedly constituted the most frequent dislocation. Statistics available in our present era of medicine assign to scapulo-humeral dislocations a frequency of between 40 to 60 per cent of all dislocations combined. Accurate statistical information relative to the incidence of shoulder joint dislocation is not available, chiefly because of the fact that a large proportion of these dislocations are seen and reduced under circumstances which render them inaccessible to statistical survey. Ordinarily the dislocation is reduced either immediately and on the spot by the athletic medical attendant or trainer, or shortly thereafter in the doctor's office, and the case, so far as records for statistical analysis is concerned, is lost sight of. Should the dislocation not yield to simple manipulative measures, or should it be associated with certain complications, the case may then appear at a clinic or hospital and be entered on the records which serve as a source for statistical information. As is true of most statistics pertaining to ailments, those relative to shoulder dislocations differ greatly from clinic to clinic, and from hospital to hospital.^{2, 3, 4, 5, 6} All agree that it occurs more often than any other dislocation, but there is an extremely wide divergence of opinion regarding its frequency relative to age and sex and regarding the appearance of complications. Published statistics concerning complications are unreliable as indices of their frequency relative to the total number of dislocations of this joint, if for no other reason than that we have no accurate statistics of the incidence of shoulder dislocation itself. Furthermore, initial dislocations of the shoulder are occasionally accompanied by complications which are completely overlooked, and of such complications, I feel quite certain that infraction of the humeral head, or "rim-fracture," constitutes one of the most common.

Historical: This complication, infraction or compression fracture of the humeral head, has for many years been associated with shoulder-joint dislocation in medical literature. Nearly a hundred years ago Fowler⁷ observed it in a number of humeral heads collected from the various pathological museums in London. Even before this, Malgaingne⁸ had noted the lesion and suggested, as was subsequently proved, that it represented a depressed fracture occurring at the time of the initial dislocation. During this early period a number of reports dealing with this defect appeared in the literature. These articles were based on studies of humeral heads resected for treatment of recurring dislocation of the shoulder joint. The advent of x-rays provided a somewhat more desirable method of detecting this infraction, and reports of x-ray studies of this lesion began to appear. It was soon found that even with the aid of x-ray, the lesion might well be overlooked unless special techniques were employed. The significant x-ray studies of this lesion by Schultz,⁹ in 1914, and by Pilz,¹⁰ in 1925, failed to release this condition from obscurity, so that it continued to defy recognition. Though in 1929 Tavernier⁶ noted its presence in every case of recurring dislocation seen by him, and in spite of the work of Hill and Sachs,⁴ appearing in 1940, it has remained in relative concealment.

Nature of Rim-fracture: This lesion is undoubtedly of great clinical significance, and those who see and treat shoulder dislocations should be familiar with it. It is a very frequent if not almost constant occurrence in cases of recurrent dislocation of the shoulder and in cases difficult of reduction and in unreduced dislocations. If it can reliably be established that this lesion is an almost constant accompaniment of recurring dislocation of the shoulder, then it must be conceded that it plays a role of greater or lesser importance in the occurrence of this condition. The importance of this role is difficult to assess, and it is undoubtedly contingent upon several factors. Some authorities^{5, 11, 12, 13} consider it minor and think the presence of the defect to be rare, or deny its oc-

* Professor of Orthopedic Surgery, College of Medicine, State University of Iowa.



Fig. 1 Typical appearance of rim fracture of humeral head. It is located on the postero-lateral aspect of the head and encroaches upon the articular surface, rather than laterally toward the tuberosity. The arm in neutral position.



Fig. 2 Humeral head in position of anterior dislocation, with rim fracture securely engaging anterior glenoidal rim.

currence. Others,^{6, 14, 15, 16, 17, 18, 19} however, recognize it as a frequent and important condition related to recurring dislocation of the shoulder.

This lesion is a wedge-shaped fracture depression on the postero-lateral aspect of the humeral head. (Fig. 1) Its lateral margin is the medial border of the greater tuberosity. Its medial margin extends varying distances on the articular area of the head. Its long axis is roughly vertical, i.e. parallel with the long axis of the humerus. Its margins are usually sharp and walls steep. Usually it represents the shape of the anterior glenoid, over which it is formed. (Fig. 2) Its size is subject to fairly wide variations, and this variability is chiefly accommodated by the articular area, so that the larger the defect the greater the articular surface involved. (Fig. 3) With the patient under anesthesia preparatory to operation for recurring dislocation of the shoulder, this wedge-shaped defect can be caused to engage the anterior glenoidal rim, over which it snugly settles. Since this infraction results from the forceful impression of the anterior rim of the glenoid into the humeral head, I choose to call it "rim-fracture."

There is little reason to doubt that this lesion results from trauma and represents an infraction or a depression fracture of the humeral head, occurring at the time of the initial dislocation of the shoulder. Though its shape and size are subject to fairly wide variation, the manner in which it is invariably produced makes its location constant. It is always associated with anterior dislocation of the head of the humerus, whether it is the result of forces acting directly as, for example, a blow over the shoulder—or forces operating indirectly through a combination of active muscle forces and fulcrum and leverage action.

The exact mechanism of the production of the rim-fracture is based on several different factors. The general location of the defect on the postero-lateral aspect of the humeral head is of course determined by the fact that it is this particular area of the humeral head which impinges or is forced against the relatively sharp anterior glenoidal rim, when the head of the humerus is in the

position of anterior dislocation. The exact position and shape of the defect is largely determined by the detailed anatomy of the proximal end of the humerus, and the anterior glenoidal area. The size or extent of the defect is a direct reflection of the magnitude of the forces acting.

X-ray Studies of Rim-fracture: If this lesion is to be identified on the x-ray film, special views are necessary. Routinely, we procure three views in the AP projection, one with the arm in the neutral or anatomic position, one with the arm in full internal rotation and the third with it in external rotation. It is usually best seen with the humerus in the position of internal rotation. If it is not visualized in any of these views, it may be brought out with the arm in slightly more or slightly less internal rotation, or by means of an axial view. To obtain this view, the x-ray tube is placed below the elbow and directed toward the axilla, with the arm slightly abducted. The cassette with film is placed over the shoulder.

X-rays of the other shoulder, particularly with the arm in internal rotation, are frequently of very considerable aid when used for comparison, especially in detecting slight changes incident to rim-fracture in the humeral head of the affected shoulder. Its presence should always be suspected, and it is usually signified by a flattening of the normal, even, globular outline of the postero-lateral aspect of the humeral head. This may be a barely perceptible regular, straight margin, or it may be a very obvious, wavy, irregular contour.

ACUTE ANTERIOR DISLOCATIONS

Traumatic dislocations of the shoulder are classified by different writers purely on the basis of the position assumed by the displaced humeral head with relation to the scapula. Of these different varieties we are now interested only in the most common, that is the anterior type, which constitutes upwards of 95 per cent of all shoulder dislocations. Furthermore, for the purposes of the subject of this paper, we do not consider any of the dislocations associated with fractures other than this specific and particular infraction of the

humeral head. It is recognized that anterior dislocations are further subdivided into different kinds, but these variations merely reflect differences in the mechanism of the production of the displacement of the humeral head from the glenoid at the instant it occurred. They are largely determined by the position of the arm, i.e., the exact location of the humeral head in relation to the glenoid at the time the dislocating forces become operative. The location of the dislocated humeral head when first seen by the medical attendant is, with rare exception, subcoracoid; the humeral head lies anterior to the glenoid margin, just below the coracoid process. It may appear as a subluxation, with the head riding upon the anterior glenoidal rim, the greater tuberosity laterally or in the intra-articular glenoidal area, and the articular area of the head directed medially toward the scapular neck region. But regardless of the location of the humeral head on the anterior glenoidal region, its *position* relative to any point on the anterior edge is always approximately the same, and because of certain anatomical details of the anterior glenoidal rim and the upper end of the humerus, the humeral head tends to lock in this position. The location and shape of the rim-fracture is thus invariably predetermined. Immediately as the dislocation occurs, stresses of considerable magnitude are brought to bear upon the displaced head and the anterior glenoid, stresses which result from the action of forces in combination with or entirely independent

of the original dislocating force. It is the magnitude of these forces which determines the size of the defect.

Whatever the mechanism productive of the ordinary uncomplicated anterior dislocation, the humeral head finally takes the same general location and position. My experience indicates that anterior dislocation most commonly occurs when strong forces suddenly act on the internally rotated upper extremity, which is initially in a position roughly midway between flexion or forward elevation, and abduction or lateral elevation, the elevation being in the neighborhood of 70° to 90° . The arm, in internal rotation, immediately gives way to external rotation during the operation of the dislocating forces, and the head assumes a position of anterior displacement as the "pivotal position"²⁰ is approached. Whether the dislocating force develops from the moving body's suddenly meeting resistance via the outstretched arm, or whether it operates through sudden, forceful impact or pressure being brought to bear upon the stationary body, is of no material significance in this study. The results are the same.

SIGNIFICANT ANATOMIC FEATURES OF THE SCAPULO-HUMERAL JOINT

It is well that we briefly consider and attempt to visualize what happens as the humeral head suddenly slides into a position of anterior dislocation. But first let us survey the scapulo-humeral



Fig. 3. Rim-fracture in humeral heads resected for old unreduced and irreducible dislocations of the shoulder. The humeral shafts, cadaver specimens, have been added to facilitate orientation. A. Fresh specimen. B. Preserved specimen.

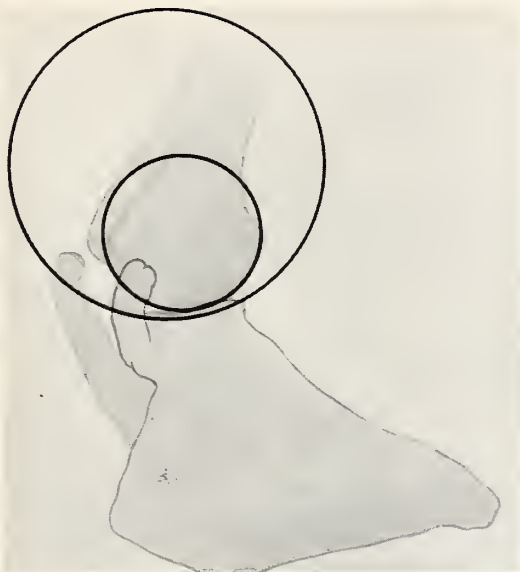


Fig. 4 Observe the disproportion between the glenoid fossa and the humeral head as represented by circles described by the radii of the arcs of their articular surfaces.

joint, noting certain relevant anatomic features. The glenoid is oval, the ratio of longitudinal axis to the transverse being 3.5 to 2.5. Its fossa is very shallow, and it is represented by an arc having a radius about twice as large as that of the humeral head. (Fig. 4) The angular value—i.e., the magnitude of the arc of the articulating surface of the glenoid in a horizontal direction—is about 50° , whereas the articulating area of the humeral head, which forms nearly half of a sphere, has an angular value of nearly 150° . (Fig. 5) This disproportion between the angular values of the humeral head and glenoid has considerable functional significance, for it makes possible an extremely wide range of motion in the scapulo-

humeral joint, by virtue of the fact that the glenoid engages no more than about one fourth of the articular area of the humeral head.

If the requirements for the wide, free range of motion in the shoulder are to be adequately satisfied, not only the osseous components of this most interesting and unique joint, but the supporting and controlling soft-tissue constituents as well, must be constructed in accordance with these demands. This essential requirement has been most adequately satisfied. In fact, so efficiently and well do the soft-tissues structures about this joint subserve this functional necessity that it is really remarkable how a joint which is so lax, elastic and free-swinging is at the same time so powerful and so well coordinated and controlled. However, these very anatomic features which serve so efficiently in this most essential element of function—that of free, universal motion of large amplitude—play a most important part in the pathomechanics of shoulder-joint dislocation. The shallow, almost flat fossa of the glenoid is totally devoid of the rigid buttresses against displacement which characterize the deep socket of such an articulation as the hip joint. And, furthermore, the scapulo-humeral articulation has remarkably frail and very lax supporting ligaments. (Fig. 6) This joint is dependent for its integrity almost entirely upon its surrounding muscles. The most important of these are the so-called shoulder-cuff muscles—the supraspinatus, the infraspinatus, the teres minor and the large, powerful subscapularis. Their tendons of insertion intimately blend with each other to become inserted into the lesser and greater tuberosities, forming almost a complete hood over this joint. These myo-tendinous structures may well be thought of as “activated ligaments” upon which the anatomic integrity of the joint largely de-

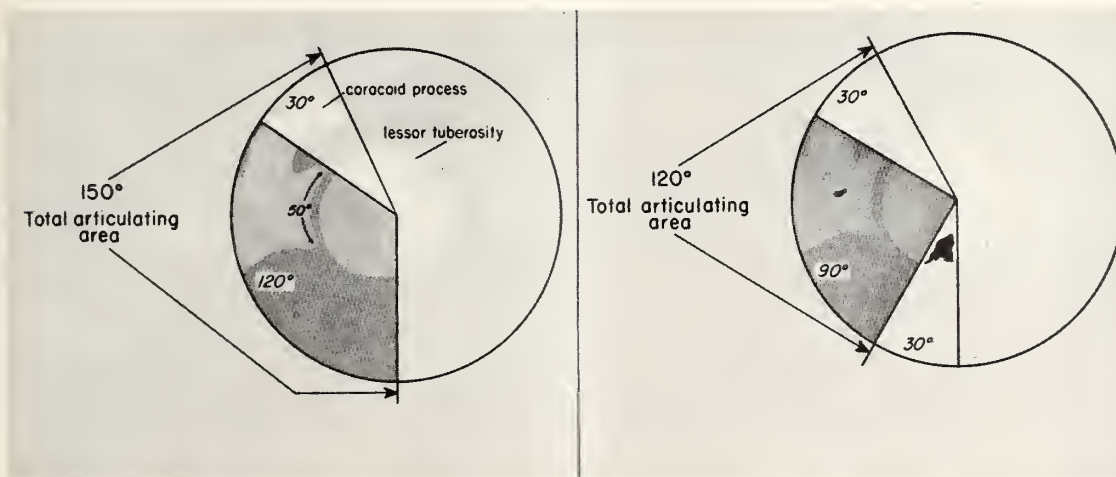


Fig. 5. Observe the relative size of the articular areas of the humeral head and glenoid. Note that with arm in neutral position there is only 120° of articular area available for external rotation. The presence of a rim-fracture will significantly reduce this area, and thus enhance the likelihood of recurring dislocations.

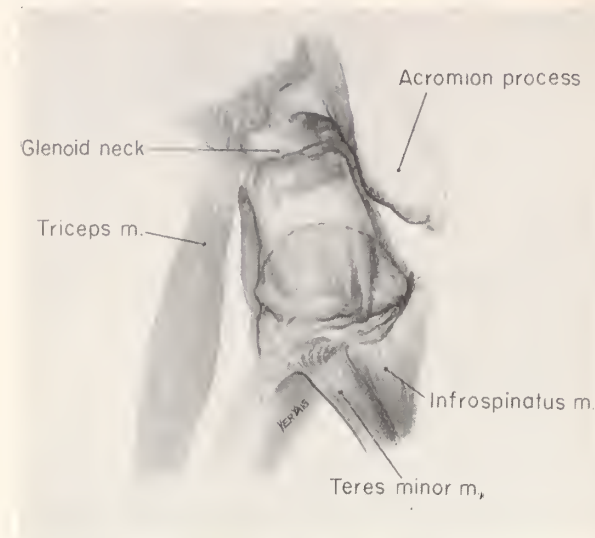


Fig. 6-A Artist's drawing of the capsule of the shoulder joint, with all cuff muscles stripped.

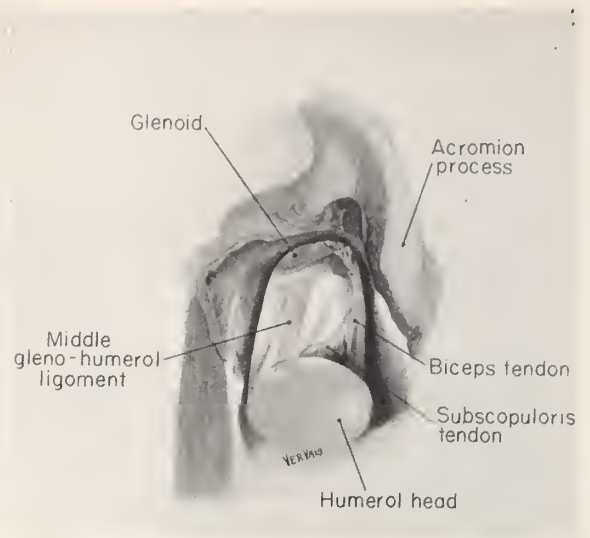


Fig. 6-B Artist's drawing of anterior capsule, the subscapularis having been dissected free. Note the frailty and paper-thinness of this structure.

pendes. These are the myoguards of the shoulder joint.

ANATOMIC, PHYSIOLOGIC AND PATHOLOGIC FEATURES

We might now direct our attention to several pertinent anatomic and physiologic features of the scapulo-humeral articulation as they affect or are affected by anterior dislocations of the joint. Since the integrity of this articulation is largely dependent upon the supporting and controlling muscles, a force applied in the proper direction—e.g., against the abducted and externally rotated arm—with sufficient suddenness to catch the protecting muscles off-guard might very easily cause the humeral head to slide and rotate through an abnormal range of motion. The magnitude of this range, from the utmost limit of normal to that where dislocation may occur, is really remarkably small. It is represented, as has already been pointed out, by an area constituting but about one-fourth of the articular surface of the humeral head. (Figs. 5 and 7) Once the motion of the humeral head has exceeded this small area, the postero-lateral region of the humeral head at the site of a normal anatomic groove or depression of varying depths which sets off the greater tuberosity from the articulating area of the head of the humerus (the so-called anatomic neck) will engage the anterior rim of the glenoid. (Fig. 8) If the dislocating force is very great, then the proximal end of the humerus will be further displaced forward on the anterior scapular neck. In this event, the greater tuberosity may be broken off, either as the result of a direct shearing action of the glenoid, or as a result of combination of this and the avulsive effect of the spinati muscles which tenaciously hold to their bony attachment during the operation of a combination of direct pulsive and indirect leverage and traction forces.

If the dislocating force is just sufficient to engage the anatomic neck over the glenoidal rim, and just short of that necessary to fracture off the

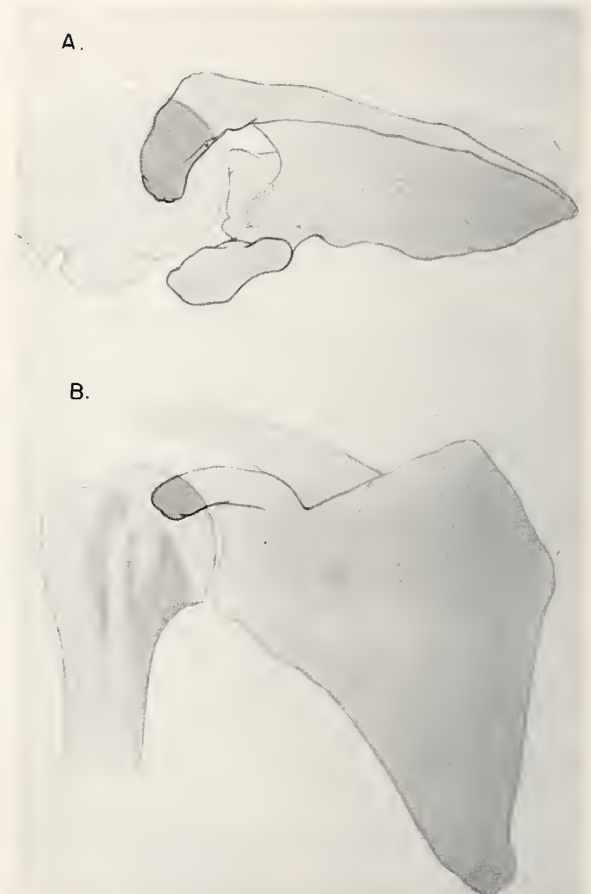


Fig. 7 Relation of head of humerus to glenoid, arm in neutral position: A. Viewed from above downward. B. Viewed from in front.

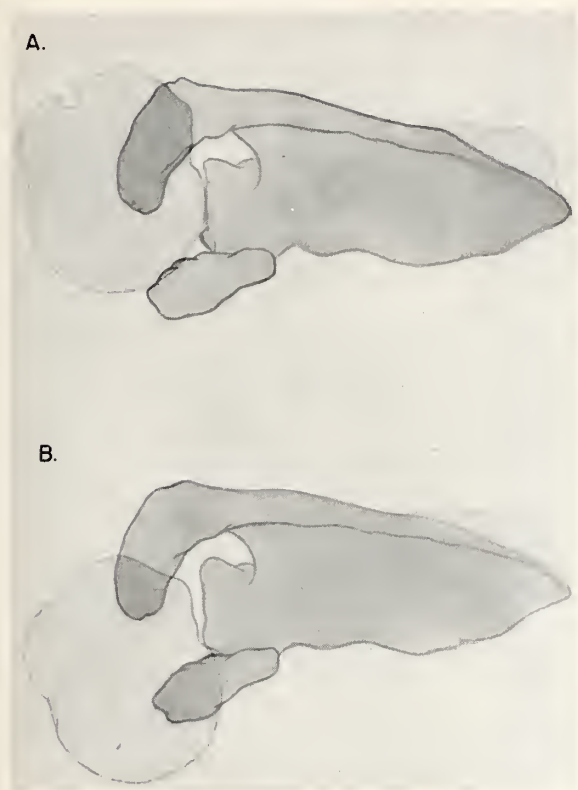


Fig. 8 A. Relation of head of humerus to glenoid, arm in external rotation, showing the very small area remaining before anterior dislocation occurs. B. Humeral head in position of anterior dislocation, anterior glenoid rim engaging anatomic neck.

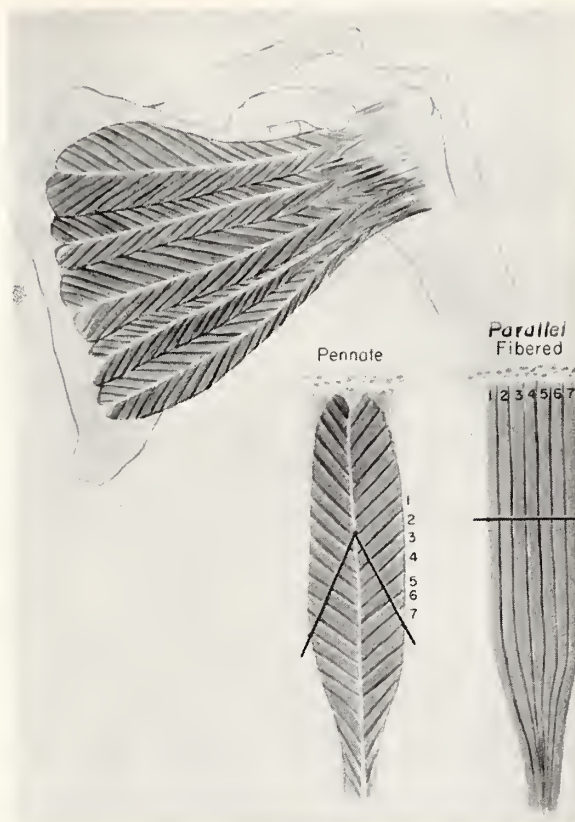


Fig. 9 Parallel and pennate fibered muscles. Note the relatively greater number of muscle fibers available for contraction in the pennate type.

greater tuberosity, one of several things may happen. If there is only the minimal dislocating force, the simple, relatively uncomplicated anterior dislocation will most likely result, and it may either reduce spontaneously or yield readily to proper manipulative replacement maneuvers. This represents the type of anterior shoulder dislocation commonly seen, and it is seldom followed by recurring dislocations or other complications. A somewhat greater force will very likely drive the relatively sharp anterior rim of the glenoid into the vulnerable anatomic neck, fracturing the thin cortical layer and sinking into the readily yielding cancellous bone. The infraction, as already pointed out, may be very small, represented by a barely preceptible depression, or it may be of such magnitude as to involve a substantial portion of the articulating area of the humeral head.

Just as soon as the dislocating head slides into the position of luxation, the natural and invariable protective mechanisms of reflex muscle spasm or contraction spring into action. There is contraction of all the shoulder girdle muscles—the thoraco-scapular, thoraco-humeral, and scapulo-humeral muscles. Those most intimately concerned are the powerful shoulder-cuff muscles—the supraspinatus, the infraspinatus, the teres minor, and the subscapularis. This last-named muscle, the sub-

scapularis, is one of particular interest and importance in this connection. It is a very large muscle, having an average cross-sectional area somewhat greater than that of the other three cuff muscles combined,^{24, 25} and it is capable of developing considerably more force than these other three cuff muscles, not only by virtue of its greater size, but because of the arrangement of its muscle fibers. The subscapularis is a multipennate muscle; i.e., its component fibers gain origin from tendinous septa arising from several oblique bony ridges on the scapula, as well as directly from the intervening bone, and are directed obliquely from these septa like "barbs on the quill of a feather." (Fig. 9) The muscle fibers which arise from the sides of these septa converge partly to the tendon of insertion which extends into their substance and partly to other tendinous septa which pass upward from the humerus to receive them.

Contrary to common conception, and except for reflex contraction induced by the local tissue damage, the supraspinatus, infraspinatus and teres minor are not necessarily put under very great tension when anterior dislocation takes place. This is accounted for by the fact that, as the anterior dislocation occurs, the position of the humerus is that of abduction and external rota-

tion, which position relieves the tension and relaxes these three muscles by approximating the insertions to the origins. The displaced position of the humeral head only slightly compensates for this lax state, taking up but a fraction of the slack provided by the external rotation abduction position of the humerus. On the other hand, the sites of origin and insertion of the subscapularis behave in a different manner. (Fig. 10) There is a divergence of the humeral insertion and the scapular origin, which serves to put the subscapularis under increased tension. This situation is ideally adapted to maintain the humeral head in the displaced position. First, by virtue of the fact that the fibers of subscapularis are in a near optimum state for development of maximal contractile force, the contraction must now be isometric; second, the angle of application is now such that the line of this force, or the pull of subscapularis, will operate almost purely in the direction of displacement.

DIAGNOSIS, PATHOLOGY AND TREATMENT

Diagnosis: Let us direct our attention briefly to the more practical aspects of our subject. Diagnosis of anterior dislocation of the shoulder joint is relatively simple. The patient leans to the affected side with his arm internally rotated and his forearm flexed, and lying across the upper abdomen and supported in this position by his other hand. And though this may not be apparent since rotation of the scapula permits the arm to assume

an apparently normal anatomic position, the arm is in abduction with relation to the scapula. The normal rounded contour of the shoulder is replaced by a shallow hollow which causes the acromion to appear unduly prominent. (Fig. 11) The displaced head, forming an abnormal prominence at the subcoracoid region, is readily palpable. The length of the arm, as measured from acromion to epicondyle, is increased. All movements in this scapulo-humeral joint are painful and markedly restricted.

X-ray examination is very essential, not only to establish the diagnosis of dislocation, but to reveal complicating factors of the upper humerus, which if present would change the mode of treatment. Rim fracture of the humeral head should be looked for. While its presence is not obvious or readily apparent, especially with the humeral head in the displaced position—rim-fracture engaging anterior glenoidal rim—the presence of a contrasting, sharp, dense line traversing the posterolateral quadrant of the head, and/or irregularity of contour with loss of architectural detail at this site is diagnostic of this infracture.

Pathologic Changes: Intelligent management of the case of shoulder-joint dislocation is predicated not only upon a knowledge of the anatomy and physiology of this joint, but upon an appreciation of pathologic changes occurring at the time of the acute dislocation. It is of the utmost importance that full and due regard be given to the likely pathologic soft-tissue alterations. The extent

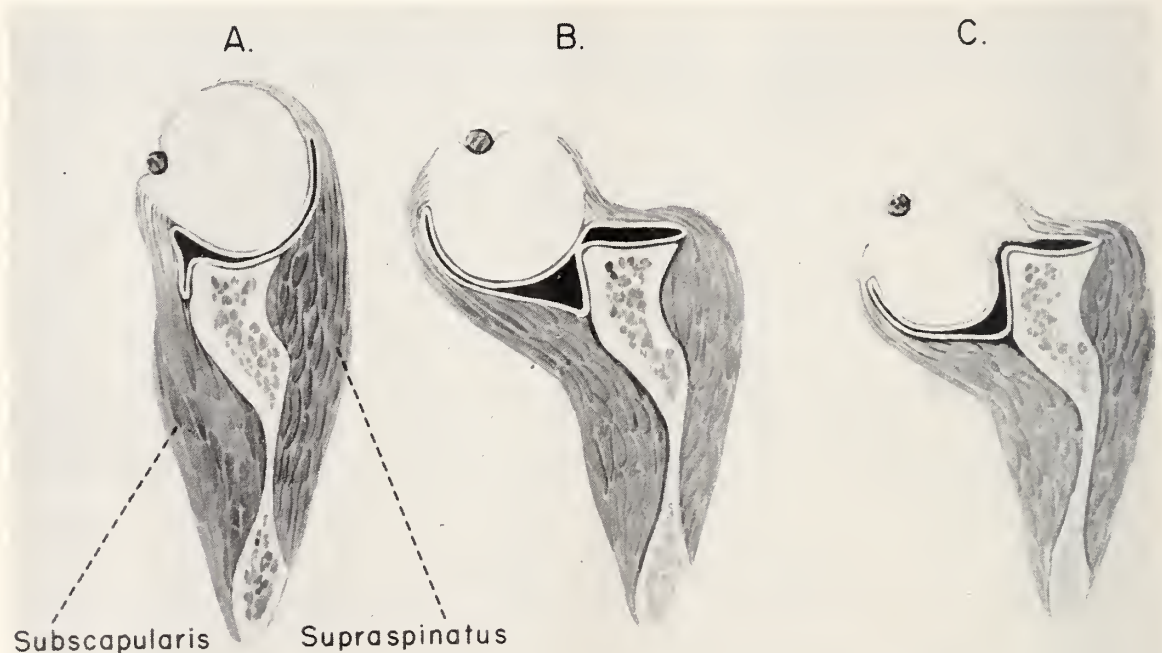


Fig. 10. Drawing of transverse section through shoulder joint, showing the relation of the humeral to the scapular attachments of supraspinatus and subscapularis, the humerus in the position of A. Neutral, B. Simple anterior dislocation, C. Anterior dislocation and rim-fracture. Note the relative laxity of supraspinatus.

and type of bone and soft-tissue damage will vary with the magnitude and direction of the dislocating force. Until recently we have had access to extremely fragmentary information relative to the pathologic events occurring in fresh shoulder dislocations. DePalma⁵ recently surgically explored 18 shoulders with fresh anterior dislocations. His observations are very enlightening and of great practical worth. The ages of the patients ranged from 18 to 64 years. With the exception of a minor fracture of the anterior rim of the glenoid in one case, injury was entirely limited to the soft tissues. This ranged from extensive rupture of the shoulder cuff, with the humeral head outside of the capsular structures in six cases, to stretching and fine superficial tearing of the anterior capsular tissues in three-fourths of the remaining 12 cases, in which the displaced humeral head remained intracapsular. The more severe injuries occurred in the older patients. His most significant observation is that in all 12 of the intracapsular dislocations the capsule over the neck of the scapula was intact and the head lay in the subscapular recess. He states: "Because of the laxity of the capsule and the gleno-humeral ligaments, one can apprehend how the boundaries of the above recesses can stretch or tear readily, if necessary, to admit the humeral head." This observation would seem further to establish the fact of the incompetence and insufficiency of the capsule and ligaments of the gleno-humeral joint in preventing anterior dislocation. It also tends to indicate the futility of surgical attempts to mobilize and employ this capsular structure by artificially fixing it to the anterior glenoidal rim, as a buttress against recurring dislocation of the shoulder.

Nicola,²⁶ in a similar study of 27 cases, presents his findings in very great brevity. He found tearing of the inferior capsule from the humerus in 5 of the 27 cases of fresh dislocations which he surgically explored. The remaining 22 cases revealed tearing of the capsule from the neck of the scapula. He made no mention of bony injury.

Treatment: For effective and atraumatic handling of a fresh anterior dislocation of the shoulder joint, it is important that, insofar as possible, the attending physician should know how the dislocation occurred and whether it was associated with minor or major violence. He should also consider the age of the patient, for this item has very considerable importance in determining treatment and prognosis. Those dislocations occurring in patients in the older age group, 50 and beyond, are much more likely to be complicated by extensive tissue damage because of attritional and degenerative changes invariably present in the shoulders in this age group. Furthermore, these individuals are prone to develop the painful, stiff-



Fig. 11 Anterior dislocation of humeral head. Note the abnormal depression below and prominence of the acromion.

shoulder syndrome following injury to this joint, whereas those in the late teens and in their twenties never develop it. On the other hand, fresh dislocation in the former group is almost never followed by recurring dislocation. With rare exception, it is only in the younger age groups in which we see this complication.

When one undertakes to treat a fresh scapulo-humeral dislocation, it is well to bear in mind that most such dislocations are simple and unassociated with extensive tissue damage, and that they should reduce with ease by employment of the proper method of reduction. It is my feeling that most fresh shoulder dislocations, and especially those seen in vigorous young athletes, initially are maintained by virtue of intense muscle spasm or contractions. Quite frequently when this involuntary muscle contraction has been relieved, the shoulder will reduce spontaneously. Later, indeed very shortly, the adjacent muscles and other contiguous soft tissue and capsular structures become markedly swollen and inelastic as the result of traumatic inflammatory reaction, and the dislocation becomes more securely fixed and more difficult of reduction. The fresh dislocation, relieved of muscle spasm, which does not yield to the first gentle attempt at reduction by means of simple, properly applied maneuvers, is undoubtedly complicated by some lesion that may be neither clinically nor radiographically apparent. Major fractures having been eliminated, this impediment to reduction may consist of extensive soft tissue damage, such as massive avulsion of the shoulder cuff with curtain-like interposition of this torn structure between glenoid and humeral head, and/or posterior displacement of the long head of the biceps tendon over the head

and over the greater tuberosity. These are complications of a major nature, and an open operation is usually necessary not only to accomplish reduction but to repair the extensively damaged structures.

These extensive soft-tissue injuries have been observed in fresh dislocations by Drs. DePalma and Nicola and by others who have explored shoulders for some persisting functional impairment sometime after the acute or initial dislocation. Though neither Dr. DePalma nor Dr. Nicola observed rim-fracture in any of the cases of fresh dislocation they explored, I feel that this lesion frequently plays a very important role in preventing reduction in those shoulder-joint dislocations which resist appropriate restitutorial endeavors. If the infracture is fairly large and its presence is not known or even thought of, reduction maneuvers which are frequently employed may well tend more securely to lock the rim fracture over the glenoidal rim. In the past several years, we have surgically treated some ten cases of old, unreduced dislocations of the shoulder, in three of which it was necessary to resect the humeral heads. All ten cases displayed the rim-fracture, and this defect in the humeral head was observed securely to engage the anterior glenoidal rim. In six other such cases in which, for one reason or another, surgical treatment was not carried out, it could be indisputably demonstrated in the roentgenograms that the anterior glenoidal rim was ensconced in a rim-fracture in the displaced humeral head. One case that we saw recently is a medical rarity indeed: a chronic, unreduced *posterior* dislocation of the shoulder joint. The head of the humerus was locked in the position of posterior dislocation, a large rim-fracture fixedly engaging the glenoidal rim. But in this instance, the rim-fracture appeared on the *anterior* region of the head and engaged the *posterior* rim of glenoid! It is my feeling that if the presence

of this defect had it been recognized and proper reduction maneuvers employed, closed reduction of the fresh dislocation could have been accomplished in that case as well as in all of the rest of these cases. As previously indicated, I feel that this rim-fracture is present in almost all cases of recurring dislocations of the shoulder, and that it plays an important role in causing this condition. In somewhat over 80 cases which we have treated by operation, it has been present in all but one in whom it was looked for.

Complete muscular relaxation should be obtained when reduction is attempted. Without it, greater force is necessary, and the likelihood of inflicting additional damage is great. The desirable state of relaxation can be achieved only by general anesthesia, but if its use will involve long delay in carrying out the reduction, or if its immediate use will involve grave risks attendant upon inexpertly administered anesthesia and inaccessibility to essential facilities for meeting the very real hazards associated with administration of general anesthesia in improperly prepared patients, I feel that replacement of the humerus should be attempted without it, especially in the young individual in whom careful examination fails to disclose evidence of complicating injuries. The pain should be obtunded by morphine; this will partially relieve the muscle spasm. Once the muscle spasm has been allayed, reduction is accomplished by constant, even traction on the arm in the position in which it lies. This traction may be applied with the elbow flexed or extended, the flexed position probably being preferable since flexion slackens the transarticular tendon of the long head of the biceps. This procedure alone will accomplish reduction in most simple dislocations. (Fig. 12-A) If the reduction is not accomplished thus, and if muscular relaxation is complete, one must then strongly suspect the presence of complications. However, it is justifiable to proceed



Fig. 12 A. Reduction maneuvers; Traction is made in line with the long axis of the arm as it lies in the position of dislocation. Gentle inward and outward rotation may be added.

further with the manipulative procedure. The physician maintains traction with one hand, while placing the other over the displaced humeral head and exerting upward—forward—and outward pressure, lifting, as it were, the luxated head from its displaced position over the anterior glenoidal rim and into the glenoid fossa. To this he may add gentle rotary motions while carrying the patient's arm into greater adduction. (Fig. 12-B) The weight of the body in the supine position is usually adequate for counter traction. If it is insufficient, adequate counter traction may be obtained by means of a band about the upper thorax. It is of importance to fix the scapula as securely as possible. In my experience, reduction in greatly facilitated by so doing. An assistant can do this manually by exerting pressure over this structure. If this is not done, effective reduction maneuvers are very materially compromised, especially in those cases in whom complete muscular relaxation has been obtained by general anesthesia. The scapula tends to swing freely with, and in the direction of, each reduction maneuver.

The management of the case following reduction will differ for the different age groups. For a patient of the younger group, the arm should be immobilized at the side of his body in internal rotation for not less than four weeks. His forearm, flexed at the elbow and lying across his chest, should be incorporated in the immobilizing dressings in order to insure the maintenance of internal rotation of the arm. At the end of this period of immobilization active use of the arm within the limits of pain is permitted, and progressive-resistance muscle exercises are instituted, directed toward the development only of the adductors and internal rotators, especially the subscapularis. They are continued until maximal development of these muscles has been achieved. This usually represents an increase in strength over the normal predislocation strength, as deter-

mined by testing the other arm, of about 60 per cent. This objective may be achieved in eight to 12 weeks.

In the older patients prolonged immobilization should not be carried out. A sling to support the arm and hold it in internal rotation is usually adequate, but occasionally the arm may be bound to the side for several days, especially when persisting pain is prominent. Very soon gravity-free motions of the arm should be begun. These should be carried out within the limits of pain, and should be continued until a good range of painless motion is achieved. Progressive muscle exercises should be used as a supplement.

It is my considered opinion that the incidence of recurring dislocations of the shoulder would be very substantially reduced as the result of this program of treatment. Of several hundred cases of acute dislocation of the shoulder immobilized for not less than four weeks after reduction, recently reported,²⁷ there has not been a single case of recurring dislocation.

SUMMARY

Dislocation of the scapulo-humeral joint occurs more frequently than all other dislocations combined, and upwards of 95 percent of these are anterior dislocations. Elucidation of the factors which make this joint so susceptible to luxations is undertaken in an attempt to establish a foundation for a rational and effective approach to the management of shoulder-joint dislocations. Accordingly, certain pertinent anatomic, physiologic, and functional features peculiar to this unique joint are discussed.

Consideration is given to the role played by rim-fracture, or infrafracture of the postero-lateral aspect of the humeral head in shoulder joint dislocations. This fracture defect is an almost invariable accompaniment of recurring dislocations of the shoulder. The significance of its role in sim-



Fig. 12 B. Reduction maneuvers—Traction maintained the head may be lifted over anterior glenoidal rim, if adduction or abduction is employed and the rotation is varied if necessary.

ple, initial anterior dislocations, dislocations difficult of reduction, and in old unreduced dislocations is stressed.

Brief attention is given to the treatment of acute anterior dislocation, based on the information above presented, and post-reduction care is discussed, and the importance of progressive-resistance muscle exercises is particularly stressed.

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BRITISH PATIENTS IMPATIENT

A practice like that of borrowing a neighbor's rifle to shoot his dog is becoming popular under Great Britain's socialized medicine.

Writing in the CHICAGO DAILY NEWS, London correspondent Ernie Hill says that under the British Health Service program patients have now discovered that they can sue the government if they don't get well. Furthermore, under the government's scheme for providing free legal aid, a separate socialist institution, they can get the government to furnish them a lawyer to handle their suit. If they win, the government pays off. If they lose, the court costs still have to be paid by the government. "So have a go," Hill says. "It's all on the welfare state."

A rash of lawsuits against hospitals has broken out under the National Health Service arrangement. "Medical authorities," he reports, "estimate that approximately 200 such suits have been filed during the last three years."

Nebraska Holds Third "Senior Medical Day"

The Nebraska State Medical Association has just conducted the third in its annual series of programs designed to orient seniors in the state's two schools of medicine to the private practices that are open to them and to create a close association between them and organized medicine.

All senior medical students were guests of the State Association at a one-day session held on April 1 at the Hotel Paxton, in Omaha. A series of short talks by practicing physicians covered such subjects as "You Will Soon Be a Doctor," "Why I Chose a Small Town to Practice Medicine," "The Mechanics of Establishing Your Office," "The Doctor's Obligation to His Community," "Medical Ethics—The Doctor's Golden Rule," and "Functions and Relationships of County and State Med-

ical Organizations." A motion picture, "Here's Health the American Way," which depicts various phases of medicine, was shown.

At the banquet, Dr. Bert Howard, assistant secretary of the AMA, spoke on "The American Medical Association, Your Colleague in Practicing Medicine." Later the presidents of the senior classes in the two medical schools each made a short response.

A large part of the program was directed toward impressing upon these future doctors that they will have duties and obligations throughout their careers. They also were informed of the opportunities for medical practice that exist in Nebraska and of the advantages of establishing themselves in rural communities.

Duplication and Other Uncommon Gastric Lesions

JOSEPH B. PRIESTLEY, M.D.

DES MOINES

DISEASE OF THE stomach has interested the surgeon for many years. The treatment of ulcer shares with that of gastric carcinoma a prominent position in medical literature. Consideration of these two conditions has to a certain extent made us less conscious of the many other less common diseases affecting the stomach.

I thought that it might be worthwhile to emphasize some of the more infrequent gastric lesions because of the interesting diagnostic and therapeutic considerations they afford, and also to make us more constantly aware of their existence. To illustrate these points, I have chosen a few cases upon whom I have operated since the war.

DUPLICATION OF THE STOMACH

In January, 1947, B. H., a girl aged 9 years, was hospitalized for three months because of anemia. Afterwards she went to school, but easy fatigue, chronic tiredness and weakness limited her activities. Twenty-six months later she entered Blank Hospital, having grown four inches but not having gained a pound. She complained of having had ab-

dominal pain for three weeks. This became acute shortly before admission and was associated with a visible abdominal mass, nausea, vomiting and sweating. On admission, she appeared very pale. The blood pressure registered 130/80 and pulse 160. The abdomen presented a dome-like mass seven to nine centimeters in diameter in the left upper quadrant. The blood contained 2,380,000 red blood cells and 4.6 grams hemoglobin per cubic centimeter. Barium outlined a normal colon, during which time the mass was unchanged. Surgery was deferred, and several transfusions were administered. The next day the mass was absent, and the abdominal pain was minimal. More transfusions were given. The following morning at 6:30 a.m. abdominal pain recommenced, and at 7:00 a.m. the same mass had recurred. An enema given at this time produced a dark bloody stool, the first gross blood observed from the gastrointestinal tract. Another transfusion was given, making a total of 1700 cubic centimeters of whole blood administered since admission. Surgery was then undertaken.

At operation (4-2-49) a mass approximately 9 centimeters in diameter was encountered in the mesentery of the small intestine. Aspiration revealed bloody fluid. The wall was thick and appeared to consist of muscle tissue. The mass was opened and much old clotted blood expressed. An exploring finger in the mass passed into what appeared to be a cystic area in the mesentery of the small intestine. Because the patient's condition was poor, the abdomen was closed with drainage. She convalesced without incident. After she had had a chance to build up, she was re-explored two weeks later (4-18-49). The muscular cystic area was excised. The pathologist described this tissue as a thick layer of smooth muscle resembling stomach. An ulcer on the posterior aspect of this sac-like structure was the apparent source of bleeding. At the lower portion of this duplicated stomach was a partially duplicated jejunum which ran in the mesentery and eventually opened into the terminal ileum. The area resected included 31 centimeters of small intestine. Her convalescence was uneventful. She has since developed into a normal young lady and has had no further trouble.

In summary, it may be said this little girl had a duplicated stomach containing a bleeding ulcer, with partial duplication of the small intestine which terminated in a communication with the



Fig. 1. Film of the stomach showing scar of previous exploration, resembling prepyloric carcinoma.



Fig. 2. Roentgen film of Menetrier's disease, showing greater-curvature deformity.



Fig. 3. Gastric neurofibroma with ulceration, resembling leiomyoma.

lower ileum about one-half centimeter in diameter. Pathological examination of the removed specimen substantiated this diagnosis.

Duplications may occur almost anywhere along the alimentary tract, but the colon and stomach constitute the more common sites. The treatment, of course, is removal of the duplicated portion.

GASTRIC SCAR

On 4-6-49 Mr. C. O'B., aged 59 years, was hospitalized after having suffered an acute gastrointestinal hemorrhage. At operation the stomach and duodenum appeared and felt normal. Upon the opening of the stomach, finger exploration gave negative results. Closure was performed with a double layer of catgut. A portion of the jejunum containing a large diverticulum was resected because it was thought this was the site of the hemorrhage. Pathologic examination of the diverticulum revealed a lymphangioma. The patient left the hospital in good condition.

On 4-30-50, one year later, this patient was readmitted to the hospital because of headache and sinus trouble. The diagnosis on a roentgen film of his stomach (Fig. 1) was "cauliflower-type neoplasm of stomach and old duodenal ulcer." He gradually became worse, developing neurologic signs, and it was thought he had a metastatic brain lesion from carcinoma of the stomach.

On 7-10-50 postmortem examination revealed a right occipitofrontal glioma. The stomach and duodenum were normal.

I recite this case history to emphasize that the scar resulting from open exploration of the stomach may at some later time be mistaken for malignancy on roentgen examination.

MENETRIER'S DISEASE

Miss F. N., aged 36 years, first seen in March, 1949, had suffered abdominal pain for four years. Recently the pain had become more severe, associated with nocturnal vomiting, persistent, epigastric, and with no ulcer features. In his interpretation of the Roentgen examination (Fig. 2), the radiologist said, "The hypertrophy of the rugae of the stomach appears slightly greater than on previous examination two months ago. Some of the rugae have almost a polypoid appearance, particularly in the middle of the greater curvature. There is one area where a fleck of barium remains, suggesting an ulcer. There is no obstruction. The duodenal bulb appears normal." Gastroscopy indicated that the rugae on the greater curvature were much enlarged and edematous.

Exploration was decided upon because of the persistent abdominal pain, severe weight loss, and the Roentgen suggestion of gastric ulcer. Carcinoma of the stomach was suspected. The entire stomach appeared thickened and edematous, unlike anything I had seen. A subtotal gastric resection was performed, even though no definite isolated lesion was demonstrable after the stomach had been opened and explored with the finger.

I would like to quote excerpts of the pathol-



Fig. 4. Lymphosarcoma of stomach.

ogist's report of the removed surgical specimen: "Approximately the proximal one-half exhibits abnormally prominent rugae with numerous foci of submucosal hemorrhages; the latter may perhaps represent the result of surgical trauma. The lower one-half of the specimen presents a smooth, finely pebbled mucosal surface without rugose pattern. . . . The submucosa exhibits an extensive edematous change with wide separation of all cellular, acellular and vascular elements. . . . There is a distinct infiltration of neutrophilic leukocytes about the bases of the mucus-secreting glands at the junction of the mucus and gastric glands."

This case represents a condition first described in 1888 by Menetrier, and occasionally reported in the literature since. All patients seem to have gastric distress with some ulcer features. Vomiting and pyloric obstruction are reported. Hypoproteinemia has been a constant finding. Balfour reported a case with cure following total gastrectomy, and advocates this procedure.

GASTRIC NEUROFIBROMA

On 7-26-51, Mr. C. H., aged 72 years, complained of bloating, flatulence, and right epigastric pain with ulcer features. He suffered several episodes of melena. Roentgen examination (Fig. 3) disclosed a polypoid neoplasm on the posterior wall of the stomach above the angle suggestive of leiomyoma. Gastric resection performed 7-31-51 was uneventful. He left the hospital nine days later. The pathologist diagnosed gastric ulcer at the site of gastric neurofibroma.

The stomach may occasionally be the site of most any benign tumor, such as an osteoma, chondroma, dermoid cyst, myxoma, aberrant pancreatic tissue, adenomyoma, lipoma, fibroma, etc. Neurofibroma is uncommon. Rost, in 1942, found three gastric neurofibromas in 250,000 admissions. They may be asymptomatic for long periods or may cause severe hemorrhage or the "weeping" type of bleeding.

I cite this case to exemplify the uncommon benign gastric neoplasm.

GASTRIC LYMPHOSARCOMA

On 2-10-51 a professional man, aged 66 years, related to me a gastric history of 18 months duration, which at first responded well to an ulcer regime. During the past few months, however, he stated, this treatment afforded him progressively less relief. The epigastric pain bore less relation to the intake of food, and he began to lose weight. We entertained the diagnosis of gastric carcinoma, and thought our diagnosis corroborated by his x-ray films (Fig. 4). Exploration was advised, even though the lesion appeared inoperable.

At operation, on 2-15-51, an extensive malignancy of the stomach, obviously inoperable, presented itself. One of the numerous large isolated nodes was taken for biopsy. This proved to be lymphosarcoma, which of course is very radio-



Fig. 5. Lymphosarcoma of stomach after Roentgen treatment.

sensitive. Following roentgen therapy phenomenal improvement resulted. Subsequent films have shown considerable improvement in his stomach. When last seen several weeks ago he complained of no pain or dyspepsia, and actively pursued his customary occupation. Fig. 5 shows his stomach on 12-27-52.

I relate this story to emphasize the great importance of abdominal exploration under certain circumstances and to urge the frequent use of biopsy.

GASTRIC HODGKIN'S DISEASE

Mrs. E. L., aged 64 years, was hospitalized because of temperature ranging to 102 degrees, epigastric pain, secondary anemia, positive roentgen evidence of gallstones and a questionable lesion of the stomach (Fig. 6). She had suffered an atypical dyspepsia for several years. A diagnosis was made of cholelithiasis and an undetermined gastric lesion.

Abdominal exploration on 10-5-48 revealed gallstones, with many enlarged glands in the gastroduodenal omentum. An extensive lesion involved the stomach and extended to the gastric cardia. Frozen section of an enlarged gland was reported as Hodgkin's disease. Fixed section confirmed this diagnosis. Cholecystectomy was performed, and roentgen therapy administered afterward. This patient again exemplifies the immense value of frozen section.

Atlee, in 1951, reported the 32nd case in which this disease could be removed by gastric resection. It has been stated that only in 10 per cent of cases is the disease so localized.

LEUKEMIC INFILTRATION OF STOMACH

On 4-18-51, examination of Mr. C. T. (Fig. 7) suggested gastric carcinoma both fluoroscopically and on the films. Further study disclosed this patient suffered from a chronic leukemia. Leu-

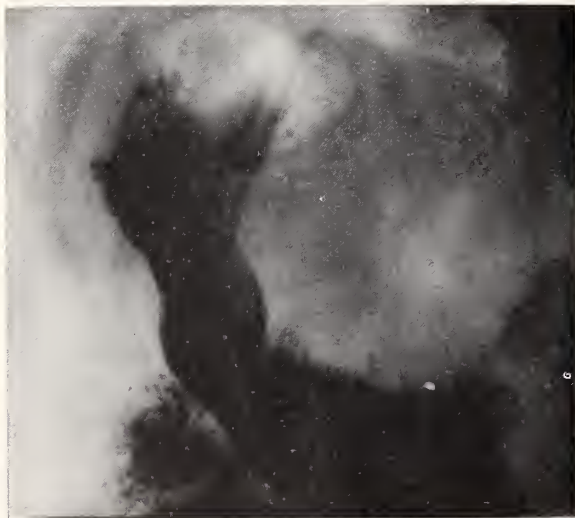


Fig. 6. Gastric Hodgkin's disease.



Fig. 7. Leukemic infiltration of stomach.

kemic infiltration of the stomach was thereupon assumed and roentgen therapy begun. His gastric symptoms improved, as did the appearance of his stomach in a roentgenogram taken seven weeks later (Fig. 8).

These last two patients illustrate gastric lesions resulting from systemic disease. Gastric lues and gastric tuberculosis likewise fall into this category. As a general rule this group benefits most from treatment of the general condition, rather than from gastric surgery.

PYLORIC OBSTRUCTION FROM INGESTION OF LYE

On 9-25-52 Mrs. A. M., aged 39 years, was admitted to Iowa Methodist Hospital in a depressed state, with the history of having taken lye the day before. The vomitus contained bloody material, and gastric lavage produced a black fluid. Under treatment she recovered nicely from her depression, but one month later she developed a pyloric obstruction (Fig. 9). At operation, the gastric wall was thick and edematous. The pyloric end of the stomach appeared almost completely obstructed. The resected specimen showed a subacute inflammation with ulceration. Later an esophageal stricture developed requiring retrograde dilation. At present her health appears good.

Esophageal stricture commonly follows lye ingestion, but pyloric obstruction occurs much less frequently. In this case we attributed it to the fact



Fig. 8. Improvement in leukemic gastric infiltration seven weeks after Roentgen therapy.



Fig. 9. Pyloric obstruction following lye ingestion.

that lye ingestion was not suspected for some hours, so that no doubt a considerable quantity of lye remained in the stomach for some time before institution of gastric lavage.

RETICULO SARCOMA PROLAPSING THROUGH PYLORUS

Mrs. M. C. complained of abdominal pain and vomiting of three days' duration, preceded by a period of atypical dyspepsia. Fig. 10 shows her



Fig. 10. Reticulo sarcoma of stomach prolapsing through the pylorus.

stomach after ingestion of the contrast media.

On 9-16-53 exploration revealed a tumor of the stomach prolapsing through the pylorus. A distal portion of the stomach was resected. The pathologist reported: "The anterior wall of the stomach is occupied by a rounded tumor bulging markedly into the lumen of the stomach. . . . It is a rounded, rather well circumscribed, rather soft structure. . . . The neoplasm is found to lie in the submucosa. . . . The tumor is partly covered by slightly thinned out, intact gastric mucosa. . . . It is the site of edema and hemorrhage. . . . Many of the cells present stellate patterns and seem to give off fibrils which connect contiguous cells with each other. . . . The nuclei of such cells are often ovoid or elongated. . . . Seldom is a mitotic figure encountered. . . . Reticulosarcoma, grade 1, of the stomach."

The patient represents a rare gastric lesion and illustrates how at times gastric lesions like the mucosa itself may prolapse into the pylorus.

HYPERTROPHIC GASTRITIS

In November, 1953, Miss W. G., aged 63 years, related a history of vague abdominal pains and an atypical dyspepsia of several months' duration. She suffered no nausea or vomiting. Her appetite remained good. She experienced no weight loss. Examinations of the blood and urine were normal. Roentgen examination indicated a marked deformity on the greater curvature of the stomach, diagnosed as an extensive malignancy. In addition she had a pelvic tumor. Gastric exploration was advised, but refused.

On readmission 2-10-54, she complained of feeling no better. She had developed pains in her legs which disturbed her sleep. Examinations of the blood and urine remained normal. The dyspepsia had lessened. Her complaint shifted more to the lower abdomen. There had been no loss of weight. Slide 11 shows the barium outline of the stomach at this time. The roentgenologist changed his diagnosis to hypertrophic gastritis, since the film at this time showed no change from the film taken three months previously. Considering her general physical condition, this seemed reasonable.

Accordingly, on 2-14-54 her pelvic tumor, which proved to be leiomyomata of the uterus, was removed. At this time exploration of the stomach revealed no tumor, thus substantiating the roentgen diagnosis of hypertrophic gastritis.

I show this slide to indicate how easily one may mistake hypertrophic gastritis for gastric malignancy.

CONCLUSIONS

Many different conditions may involve the stomach. A good general work-up of the patient brings to light systemic conditions. Frozen section offers great assistance in directing surgical judgment at the time of operation. Abdominal explora-

tion must never be overlooked as a means, under many circumstances, not only of establishing the diagnosis with certainty but also of instituting the correct treatment.

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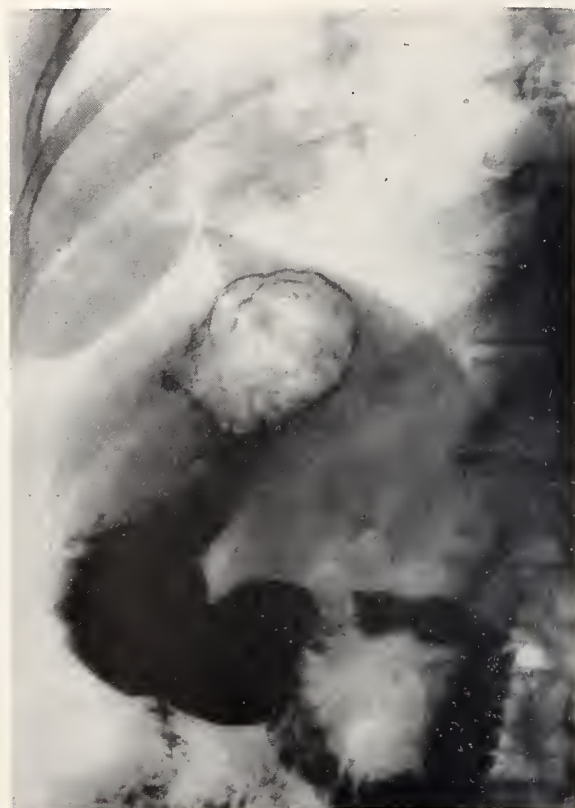


Fig. 11. Hypertrophic gastritis.

Magnetic Extraction of Gastric Foreign Bodies

L. B. WILLIAMS, M.D.

MAQUOKETA

THE USE OF magnetism in the removal of certain foreign bodies was first suggested and used by Chevalier Jackson^{1, 2} in the external application of magnetic force during the bronchoscopic extraction of a steel jacketed bullet. The first reported removal of a foreign body by the peroral route with a magnet was by Silber et al.³ They removed a small padlock from a patient's stomach by means of a small cylindrical magnet made of Alnico. Alnico is an alloy of aluminum, nickel, cobalt and iron which is capable of being highly magnetized and will lift 25 times its own weight. It is manufactured by the General Electric Co. and is specifically designated as "cast Alnico-V."

Subsequently, Equen^{4, 5, 6, 7, 8} devised an instrument for the magnetic extraction of foreign bodies from the stomach and a smaller model for intratracheal and intrabronchial use. For use in the upper intestinal tract, an Alnico magnet 3.5 cm. in length and 0.5 cm. in diameter is fixed to a size 12F Levin tube with a metallic stylet in the tube to increase maneuverability. A small opening in the tube at the magnet end allows the inflation of the stomach by air, which increases the likelihood of contacting the foreign body with the magnet.

Recently, I extracted a gastric foreign body with a locally improvised magnet, and I believe the case may be of interest to many physicians who are confronted with a similar problem and do not have access to a special extraction magnet.

W. V., a two-year-old girl, swallowed a bobby pin at approximately 3 P.M. A flat plate of the abdomen at 4 P.M. revealed the foreign body in the gastric fundus. (Fig. 1) The possibility of magnetic extraction was immediately considered, but none of the special instruments described above were available. A local auto repair shop was able to provide a nearly ideal magnet, however. Auto men commonly use a small magnet to extract lost screws, nuts, etc., from inaccessible places, a common type of magnet being the "small pick-up" made by Snap-On Tool Corporation, Kenosha, Wisconsin. It comprises an Alnico magnet on a hinged handle, the magnetic portion consisting of a rod 0.7 cm. in diameter and 6.5 cm. in length, with the actual Alnico magnet comprising 1 cm. at the tip. (Fig. 2) It is advertised as being capable of picking up 8 ounces. The

magnetic rod was removed from the handle and tied securely to a size 14F urethral catheter. It was passed into the stomach at approximately 5 P.M. and, on the second attempt, a bobby pin measuring 5 cm. was extracted. No fluroscope was employed nor was anesthesia or pre-medication given. The child was immediately discharged, ate a good meal and has since been entirely well.

DISCUSSION

The magnetic extraction of foreign bodies from the stomach is a relatively recent approach to the problem, but has proved to be a simple and harmless method. Hart⁹ reported 6 cases of simple removal. Equen⁴ reported removal of a nail from the duodenum and several cases of extraction of open safety pins.⁵ If an open safety pin is encountered in the lower esophagus, for example, the point will almost always be up. The pin is drawn into the stomach by the magnet and, after inflation of the stomach, the pin is "juggled" under fluroscopic control until it is attached to the magnet by the spring end and withdrawn. The



Fig. 1

trailing point causes no damage to the esophagus.

The limitation of this method is that the foreign body must have magnetic attraction, but, according to Equen, only about 10 per cent of foreign bodies in both the GI and respiratory tract are of this nature. It is common knowledge that a great majority of small foreign bodies will pass in the stool in a few days without apparent difficulty or harm. Yet the magnetic extraction is a simple procedure and spares the persons involved many hours or days of watchful waiting and multiple x-rays, the problem being resolved in a few minutes after diagnosis. There is always a possibility of perforation or obstruction by any foreign body, especially in the region of the pylorus and duodenum, where the fixed angulations prevent the passage of an especially long object such as a bobby pin. The trans-abdominal removal of a foreign body from the retroperitoneal duodenum can be a formidable procedure, both in finding the foreign body and in its actual removal.



Fig. 2

It is noted that no anesthesia or pre-medication was used in this case, it being my opinion that there may be more momentary discomfort during the procedure but the patient is entirely alert to protect the respiratory tract from invasion either by vomitus or by the foreign body.

SUMMARY

1. The subject of magnetic extraction of foreign bodies from the stomach is discussed and the literature reviewed.
2. A case of removal of a bobby pin from a child's stomach by a locally improvised magnet is reported.
3. It is suggested that magnetic extraction be attempted in every case of magnetic foreign body of the stomach, especially if the particle is exceptionally long or sharp.

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SALT AND WATER IMPORTANT IN PRE-MENSTRUAL TENSION

Studies in recent years have shown that relief of pre-menstrual tension, a relatively benign condition, can be obtained with simple diuretic measures, according to an article in the April issue of the *DIURETIC REVIEW*, a publication supported by Lakeside Laboratories, Inc., of Milwaukee. The paper presents a development based on the hypothesis of the late Dr. Robert T. Frank that hormonal imbalance, a disturbance of the proper ratio between the estrogen produced by the ovarian follicles and the progesterone produced by the corpus luteum, is responsible for the occurrence of edema.

Subsequent investigation, the article says, has revealed secondary effects on the secretion of adrenal hormones affecting salt and water retention and the secretion of the anti-diuretic hormone by the posterior pituitary.

Should Mothers Be Permitted to Remain With Their Children in the Hospital?

WALTER M. BLOCK, M.D.

CEDAR RAPIDS

WHETHER MOTHERS SHOULD be allowed to stay with their children in the hospital is a question which doctors and nurses alike have tacitly tried to avoid for too long a time. For years, this dispute has also been a bone of contention between the medical profession and the public, and many verbal battles have been fought over it in doctors' offices and hospital corridors.

Because an adequate answer is certainly overdue, an attempt to find a solution to this urgent problem is herewith presented.

Some hospital authorities are decidedly against "having mothers around." In the effort to secure maximum efficiency for the performance of nursing duties, they undoubtedly have good reasons for this point of view. Yet, any physician dealing with children should be ever conscious of the emotional aspects of hospitalization. Pondering diagnostic and therapeutic considerations, the attending physician all too often does not give sufficient, if any, thought to the psychologic trauma he may inflict on the child about to be hospitalized. There are, of course, marked differences in the way a child responds to hospitalization, depending mainly on his age, his emotional makeup and the adequacy of his preparation for the impending experience. The greatest problem is generally created by the preschool-aged child suffering from an acute illness which requires sudden hospitalization. Have we, really, in the past shown adequate understanding or given sufficient consideration to the magnitude of the problem? Ever more clearly, pediatricians are realizing the impact of emotional trauma on a child's health and recovery power. Although admittedly not for all, being hospitalized is at best a disturbing experience for many children, especially if surgery has to be performed.

Personally an advocate of liberalizing present hospital rules, I have undertaken a survey in order to find out what pediatricians over the country think about the problem. A questionnaire was sent to 71 large and small pediatric departments selected at random from the AMA's list of hospitals approved for pediatric residents' training. The letters were addressed to the respective Chiefs of Service. Fifty-nine replies were received.

PROBLEMS INVOLVED

The difficulties involved in letting mothers stay

in the hospital are fully realized. Chiefly, they seem to be as follows:

1. Most hospitals do not have adequate facilities—i.e., private rooms—to accommodate mothers. To permit them to stay in an open ward is well nigh impossible.

Suggested Solution: when the building or remodeling of a hospital is planned, provisions should be made in the pediatric department for at least one or two private and two or three 2-bed rooms, with sufficient space to accommodate mothers.

2. If one particular mother is allowed to stay, the mothers of all the other children will probably demand the same privilege.

Suggested Solution: If, by means of an extensive educational campaign, the cooperation of the public can be secured, parents will come to understand that actually only few children need their mothers with them at all times. Parents must be informed that very few hospitals have enough space to permit a considerable number of mothers to stay, and that the few available facilities must be reserved for those patients whose separation from their mothers would, in the opinion of the doctor, be definitely detrimental to the child's recovery.

3. Some mothers are too demanding and may make life difficult for the nurses.

Suggested Solution: Mothers who may prove too demanding or temperamentally unsuited to stay should have their staying-in privileges withdrawn. Instructions should be given in advance, warning parents that the hospital always reserves the right to cancel staying-in privileges. Such a clause may very likely prove educational, too, by keeping otherwise demanding mothers from requesting too much of the nurses.

4. Some mothers are emotionally unsuited to remain with their children; consequently, such a patient is better off without the mother's presence.

Suggested Solution: same as for No. 3.

5. Last, but not least, we should be honest enough to admit that hospital authorities and physicians alike would hear some criticism if mothers were aware of everything that may happen to children in a hospital. On the other hand, I believe a great deal of improvement in the care of hospitalized children might take place if all attending personnel were aware that the critical eyes of an anxious mother watched their every

step. Few people realize what it means to parents to turn their child over to a hospital and to a group of total strangers.

There is little doubt that changes in traditional hospital rules are in order. Most pediatricians seem to be of that opinion, if one may judge from the comments made on the questionnaires. Many of the nation's outstanding child specialists have offered their advice liberally, and the writer is most grateful for it.

QUESTIONNAIRE

Question	Answers*		Qualified
	Yes	No	
1. Do you have a fixed rule in your department that mothers are not allowed to stay with their children (unless child is critically ill)?	28 (37)	20	9 ¹
2. Do you find it a handicap to good nursing and smooth hospital routine if the mother is permitted to stay?	20 (21)	23 (26)	11 ²
3. Do you think the mother who stays with her child is much help to the nurses by feeding her child, caring for his elimination, etc.?	30 (34)	11	12 ³
4. Do you feel it a psychological trauma to a child to be left alone in the hospital without his or her mother?	30 (41)	9 (10)	12 ⁴
5. If you had the facilities, would you advise to have the mother stay with her child in the hospital?	30 (33)	12 (13)	13 ⁵

* Figures in parentheses () indicate total number of answers, after qualified answers have been properly classified.

1. "Yes, but not in private rooms" (5 instances)
2. "No, only sometimes" (3 instances)
"Depends on mother" (7 instances) Added to neither "yes" nor "no" column.
3. "Sometimes" (8 instances) Added to neither "yes" nor "no" column.
4. "Yes, but only at first" (1 instance)
"Sometimes" (9 instances) Added to neither column.
"Not if mother allowed to visit 10 a.m. to 6 p.m." (1 instance)
5. "Sometimes" (5 instances) Added to neither column.
"Individual selection advised" (3 instances) Added to neither column.

DISCUSSION OF REPLIES

A large majority of the answers received stress the need for "greater flexibility of existing hospital rules." Many of the doctors expressed the opinion that decisions about mothers' being permitted to stay in should be handled on an individual basis. Others make a plea for a more understanding attitude towards mothers on the part of hospital staffs. A great many pediatricians believe that mothers could be helpful in performing minor nursing chores, but a working agreement should be arranged beforehand, instructing the mothers which tasks they may perform and what duties must be left to the nurses.

There were a few replies which stated that "attentions expected" and "unreasonable demands"

from the mother might delay rather than expedite nursing care of the patient. One hospital experienced difficulties with mothers' wandering from room to room, exchanging toys and even food trays.

Among the many replies received, I would like to quote from a few to demonstrate the need for a re-evaluation of the problems of hospitalized children.

Dr. Charles A. Janeway and his staff, at the Children's Hospital in Boston, have recently conducted a study pertaining to the problem at hand. They advocate flexibility of rules. "With many children," Dr. Janeway writes, "having mothers stay is important, with others it is not, and with some it is definitely bad." In planning a new hospital, Dr. Janeway would like to see provisions made for mothers to stay with their children.

Dr. Hulda E. Thelander, from the Children's Hospital in San Francisco, states she has studied the problem for quite some time. If the child is very upset, the mother is allowed to stay for long periods of time. Often, also, if mother and nurse agree it would help the child if the mother were to stay, it is arranged. Dr. Thelander then writes: "The question largely solves itself if the nurses and doctors get imbued with a little humanitarianism towards mothers and children."

Of interest are the opinions expressed by Dr. Benjamin M. Spock, from the University of Pittsburgh. The extensive comment Dr. Spock was kind enough to supply contains one note emphasizing a readily overlooked fact which often neither doctors nor nurses are aware of, namely, that there can be a marked reaction to hospitalization after the child has returned home. Dr. Spock writes: "... Two-year olds often show extreme separation anxiety—not while in the hospital, but on going home." He says further, "Infants six to twelve months of age wither most rapidly when deprived grossly of a maternal type of attention. Institutionalized infants become apathetic and often malnourished, and their development quotients plummet when they are deprived of all affection." It also is his opinion that "... on a theoretical basis, there is always some degree of trauma from the separation involved in hospitalization, but it may be slight or severe, and ... psychologically it would be preferable in a majority of cases to have the parents live in."

Dr. Russell J. Blattner, of Baylor University, believes that "... the mother-child relationship is extremely important in child care. However, the parent must not be allowed to interfere with effective therapy of such a patient. Individual differences in the care of certain patients might arise, but in general I think the parents are a definite benefit to the child who is hospitalized."

Representative of many answers received to question No. 1 is the reply of Elaine Franke, R.N.,

pediatric supervisor at Blank Memorial Hospital, Des Moines, Iowa (Chief of Service: Dr. L. F. Hill). Her answer is, "Yes, we do have fixed rules against staying-in, but . . . we allow many exceptions to this rule, and most parents co-operate readily."

EVALUATION OF PROBLEM AND SUGGESTION FOR ITS SOLUTION

There evolves from the replies received the general impression that many pediatricians would like to have facilities for mothers' staying, if indicated, but that lack of space does not permit them to do so.

There is also prevalent a misguided belief that once we let the barriers down and permitted mothers to stay with their children when indicated, hospitals would be turned into "hotels." Such a fear seems quite unfounded. It is not our intention to advocate that the mother should remain with her child in every instance. Most children adjust themselves very well to the experience of hospitalization; a few even enjoy it. Present rigid rules should be cast aside for the benefit just of those relatively few children who suffer unduly under separation from their mothers. It is a well-known fact that some children even require sedation just to keep them from crying excessively.

The expert advice elicited through the questionnaires seems to suggest the following compromise solutions:

1. Rigid hospital rules of "absolutely no staying-in permitted" should be entirely abandoned in favor of flexible rules, allowing individual decisions.

2. Mothers should be permitted to stay with their children through the process of being admitted; they then should be allowed to remain at the child's bedside for an hour or so, until the child gets acquainted with the strange, new surroundings and the people caring for him.

3. There rarely is need for mothers to stay overnight, but if this too seems indicated, a cot should be provided in a private or semi-private room.

4. Visiting hours should be liberalized. Mothers should be allowed to visit in the morning and afternoon and fathers should be permitted to see their children in the early evening, after working hours.

5. If possible, facilities should be created to allow the mother to stay in, provided the attending physician and the pediatric supervisor feel that her doing so would prevent undue suffering and excessive crying or other emotional strain on the child which cannot otherwise be controlled. This holds true especially for postoperative cases and for apprehensive, sensitive, irritable and restless children.

6. The mother's suitability as a candidate for

staying-in should be evaluated jointly by the attending doctor and the floor supervisor.

7. Last, but possibly most important, is the planning for a well-organized educational campaign. The public will have to be taught first to understand the aim and purpose of such a program. It is therefore suggested that a pamphlet be handed to the mother upon admission of her child, and that she be asked to read it immediately. Such a pamphlet should not merely point out hospital rules and regulations, as has been the custom in the past, but instead should attempt to gain the mother's confidence and cooperation from the very beginning. (Suggestion for such a pamphlet at the end of this paper). Such a pamphlet should receive widest possible distribution to disseminate knowledge about the significance of a liberalized hospital program in a given community. Such pamphlets could well be placed in every doctor's waiting room.

AN APPEAL TO THE NURSES

This discussion could hardly be complete without a few words addressed to the nursing profession in particular. Without the nurses' full cooperation, any improvement of existing conditions is unfeasible.

Every nurse who is assigned to a pediatric department should show a genuine interest in every single patient and must be willing to exercise unending patience with the child and his parents. Success can be achieved only if parents are never considered a "nuisance" and if the nurse tries to imagine that the patient she is caring for is her own child.

Most encouraging is a report in the March, 1951, issue of *HOSPITALS* on the experience of a small hospital in a rural area of New York State. Although the plan of letting mothers stay with their children had always met with the opposition of the nursing staff, it nevertheless was decided to give it a trial. It turned out to be a great success, resulting in the floor supervisor's full approval and her ecstatic remark: "What a source of comfort to the children!"

An article written by a nurse*, is most heartening to anybody concerned with the welfare of hospitalized children. Quoted in her paper is this remark of an English physician: "If frequent visits are of advantage to adults, how much more are they to children separated from their parents and in strange new surroundings, often with very little love and sympathy and a longing for the sight of familiar faces."

The author points out in her article that nurses have a golden opportunity to teach the receptive mother how best to care for her child—an opportunity, she states, which nurses previously have not taken advantage of. Advocating a better parent-nurse relationship, she admits that a child's

need for his parents is very individual, but also states that "few of us are truly aware of the mental agony of these children." Separation of parent and child, the writer points out, comes about normally in a process of growing up, of weaning, but the advisability of a sudden and forced separation when the child is ill might be questioned.

It therefore seems advisable for the medical society of a given community to take steps in order to revise existing rules pertaining to the pediatric department of their local hospitals, in accordance with the individual needs and facilities.

Following is a suggestion for a pamphlet to be given to the mother upon hospitalization of her child.

WE WELCOME YOU and your child to our hospital family. Do not feel that we are taking your child away from you; we are merely giving him what your doctor thinks he now needs most, namely, medical supervision and expert nursing care. This you cannot provide, although we realize that nobody can quite take your place.

Most youngsters adjust themselves quite well to the hospital. You may not know this, but we ask that you trust our experience gained by observing thousands of children. They seem relieved as soon as they see all the other children alone in their beds.

A great deal of study has gone into the problem of whether you should stay with your child or not. Let your doctor, in whom you have placed your full confidence, together with the supervisor of the children's department, make the decision.

* Marion Stevens, R.N., B.S.; Am. Journal of Nursing, 49:233, (April) 1949.

Then accept it willingly, as having been made with the best interest of your child in mind. Many children are better off let alone. Some do need their mothers around.

If we feel that you should stay with your child and have permitted you to do so, please comply unhesitatingly and cheerfully whenever the nurse asks you to leave the child's room for a while. Children will readily play up to their mother's emotions by crying excessively when slightly hurt, as may be necessary when doctors and nurses must obtain a blood test, give injections or perform other essential procedures. At such times, the youngster is generally better off left alone with the nurse or doctor.

Do not ask the nurses for special favors. They will care for your child to the best of their ability. Often a patient may have to wait his turn while a more seriously ill child receives the staff's immediate attention. Please, stop to think before you condemn a nurse as being "slow," and do not forget that there still is a considerable shortage of nurses in the country.

This hospital reserves at all times the right to withdraw previously granted staying-in privileges, if the attending physician feels the child would be better off if left alone.

For the benefit of your child, visiting hours have been liberalized and you may visit your child between the hours of and If, because of his working hours, the child's father cannot come to see the child during these hours, he may visit in the evening from to

Thank you for your cooperation.

..... Hospital
.....
Superintendent

State University of Iowa College of Medicine

Clinical Pathologic Conference

March 3, 1954

SUMMARY OF CLINICAL FINDINGS

A 34-YEAR-OLD white woman, a known diabetic since 1944, was admitted to the University Hospitals on March 3, 1953, with a history of generalized edema, dyspnea, and cough since October, 1952. She had been treated at home with mercurial diuretics, low-salt diet, and bedrest without any appreciable change in weight. Later, hemoptysis, epistaxis, menorrhagia, and metorrhagia developed. Ten days prior to admission, the patient was admitted to a local hospital with symptoms suggestive of an upper-respiratory in-

fection. Three days before admission she developed drowsiness, polydipsia, and polyuria. There were also some nausea and vomiting.

Prior to the onset of the present illness, the patient had controlled her diabetes on 35 units of PZI and 25 units of NPH. However, several days before admission this was reduced to 12 units of NPH.

The patient had had the usual childhood diseases and was otherwise well until March, 1944, when diabetes mellitus became manifest. In June, 1944, a ruptured tubal pregnancy was followed by

a hemolytic staphylococcal septicemia, and a severe anemia developed. Achlorhydria, atrophic gastritis, and macrocytosis were found, but there was no reticulocytosis following the injection of liver. Blood transfusions were given, and the patient was discharged. In March, 1945, the patient was seen again at the University Hospitals with a severe anemia. A diagnosis of pernicious anemia was made after a reticulocytosis of 24 per cent following the administration of liver extract.

Physical examination revealed the blood pressure to be 160/80 mm. Hg., pulse 90 per minute, respirations 28, and temperature 100° F. The patient was drowsy and appeared chronically ill. There was a "fruity" odor to the breath. Generalized pallor, ecchymoses, and "pitting" anasarca were conspicuous. She responded coherently to questions. The fundi revealed numerous hemorrhages of all shapes, plus exudates and sclerotic vascular changes. Bullous myringitis was seen on the left. There was decreased resonance and there were decreased breath sounds, with increased vocal fremitus over the right lower chest, posteriorly. The heart was enlarged 2 cm. to the left of the mid-clavicular line. A systolic murmur was heard at the base of the heart. Ascites was demonstrable in the abdomen.

Laboratory findings: Urinalysis revealed the specific gravity to be 1.022, albumin 4 plus, acetone 4 plus, sugar 4 plus, and microscopic negative. Hemoglobin was 7.6 grams per 100 ml.; red blood count was 2.84 per cu. mm.; white blood count was 26,600 per cu. mm. Sedimentation rate was 134, hematocrit 25 per cent, platelet count 2,000 per cu. mm., and reticulocytes were 7.5 per cent. CO₂ combining power was 24 volumes per cent, blood sugar was 744 mg. per cent, blood urea nitrogen was 35 mgm. per cent and creatinine was 2.4 mg. per cent. Total plasma proteins were 4.70 gm. per 100 ml., albumin 1.97, and globulin 2.73. A chest x-ray revealed a blunting of the right costophrenic angle and infiltration of the right middle and lower lung fields. Sputum cultures revealed Beta hemolytic streptococci and aerobacter aerogenes. Acid-fast studies for hemolytic staphylococcus aureus were negative. An electrocardiogram was normal.

The patient was treated with insulin, 150 units a day, and intravenous fluids. S.R. penicillin, 400,000 units twice daily, was given for two days, then aureomycin, 500 mg. every 6 hours for a week, and after that, aqueous penicillin, 1,000,000 units every 6 hours, and streptomycin, 1½ gms. twice daily. Mercurial diuretics were used sparingly.

After 24 hours, the diabetes was under moderately good control and the patient was given whole blood and serum albumin, with some loss of edema. The oral body temperature remained above 101° F., and the cough became productive of chocolate-colored sputum. A thoracentesis removed 1000 ml. of straw-colored fluid having a

specific gravity of 1.020. Chest x-rays showed a "breakdown" of the pneumonic lesion. The blood urea nitrogen and creatinine continued to rise, being 42 mg. per cent and 3 mg. per cent, respectively, two days before death. The patient died on March 18, 1953.

CLINICAL DISCUSSION

Dr. Robert C. Hardin, Internal Medicine: This 34-year-old lady had been known to have diabetes for approximately nine years before her admission. Five months before she came here, she had developed generalized edema and, shortly after that, a cough. She had been treated at home with mercurial diuretics, low-salt diet, and bedrest, without any appreciable change in the edema. Later on in the course of this illness, there developed hemoptysis, nosebleed, and vaginal bleeding. Ten days before coming to us, she had been admitted to a hospital in her home community for symptoms suggestive of an upper-respiratory infection, and after this admission she had developed drowsiness, polydipsia, polyuria, and vomiting. We gather that this diabetic had developed some complications leading to edema, such as kidney disease or heart failure, and that she had developed an infection, together with diabetic acidosis. Her regimen for the control of diabetes had consisted of 60 units of insulin daily, split between a long-acting and an intermediate-acting insulin. There is no mention as to what her dietary regimen was. Several days before coming to the hospital here, her total insulin dosage had been dropped to 12 units of intermediate-acting insulin.

We are led to the speculation that she might have had kidney disease due to diabetes, since these people often develop a need for less insulin or at least a less apparent need for insulin because of a high renal threshold. In going through the woman's past medical history we find a rather complicated situation. She had been well until diabetes developed and had, in fact, progressed nicely after the onset of this disease until she became pregnant. Hers apparently was a tubal pregnancy, and it was followed by a severe infection, known to have been hemolytic staphylococcal septicemia. Following this, severe anemia also developed. She was found to have atrophic gastritis and achlorhydria; and macrocytosis was found. I assume that this discovery was made during a study of the peripheral blood. She was given blood transfusions, apparently brought to a near normal blood picture and discharged. Approximately eight months later, she was again admitted to this hospital with a severe anemia. At that time a diagnosis of pernicious anemia was made, apparently on the response to the injection of liver with a satisfactory reticulocytosis. The person who handed me this protocol for discussion has penned a marginal note which, I think, gives me one piece of information which you do

not have, "From that time until her final admission to this hospital, she had received regular doses of liver extract." I assume that those doses were of the size ordinarily expected to control pernicious anemia.

The physical examination here showed a systolic elevation of 160 and a diastolic pressure of 80. She was breathing rapidly and had a slight elevation of temperature. She was drowsy, and there was an acetone odor to her breath. She was pale, had pitting edema and had ecchymoses apparently scattered over the body, but she did respond to questioning. Therefore, we would say that she might well have been in diabetic acidosis. Certainly she was not in diabetic coma. Examination of the fundi showed a mixed retinitis, with the hemorrhages, exudates, and vessel changes which one would ordinarily expect to find in a diabetic with some hypertension. A middle-ear infection was present. The chest was abnormal.

The physical signs listed here don't fit each other well. "There was decreased resonance and decreased breath sounds," (I guess that means that they were decreased in volume), and "increased vocal fremitus over the right lower chest—." These do not go together unless we assume that the patient had a pneumonic lesion, with increased density overlaid by a certain amount—exactly the right amount—of fluid to produce these findings. The heart was slightly enlarged, and systolic murmurs could be heard. There was ascites.

The laboratory findings are also interesting. The specific gravity of the urine was within normal range. Albuminuria and glycosuria of marked degree were present. Acetone was also noted in the urine. Her marked anemia was a little surprising, since she had had what we assume was adequate treatment. A leukocytosis was present and, surprisingly, a thrombocytopenia. These findings perhaps are not surprising in view of the fact that in her history and physical examination there was evidence of a bleeding tendency. One wonders why she had a thrombocytopenia. One expects that people who have uremia will tend to bleed, and we learn later on in the protocol that she did have a moderate uremia. Such people do not have thrombocytopenia. Thrombocytopenia is seen, however, in uncontrolled pernicious anemia, the degree of platelet lack being proportional to the severity of the anemia. She was acidotic, with a CO_2 combining power of 24. The blood sugar was markedly elevated, and, as we have said, the urea nitrogen and creatinine were elevated. She had a low total serum protein and a reversal of the albumin-globulin ratio. Summarizing the evidence, I think we could say at this point that the patient had diabetes, that she had kidney disease, presumably upon the basis of her diabetes, and that she had kidney failure. There is no evidence in the protocol that the edema was due to heart failure. X-ray films of the chest re-

vealed a blunting of the right costophrenic angle, which would be taken, I believe, to mean that she had fluid in the chest and also an infiltration in the right lower lung field. Sputum cultures revealed Beta hemolytic streptococci and aerobacter aerogenes. I'm not sure whether it revealed hemolytic staphylococcus aureus or not, but apparently there were no tubercle bacilli.

I should like us to see the films at this point.

Dr. Stephen A. Forbes, Radiology: A chest film on the day of admission shows areas of consolidation adjacent to the lower border of the right hilum and in the right upper lobe. There is a faint radiolucency in the center of a latter consolidation, suggesting a breakdown within it. Nothing is present to suggest infiltration or consolidation in the left lung. There is nothing remarkable in the size or shape of the heart. There is subcutaneous edema over the chest.

Dr. Hardin: How about the diaphragm on the other side?

Dr. Forbes: The diaphragm is normal in position. Both costophrenic angles are clear. There is no evidence of fluid at either base at this time.

A lateral film shows the lower area of consolidation in the region of the right middle lobe. The upper area seen on the PA film is demonstrated in the right upper lobe. The area of suspected breakdown is not as well demonstrated as on the PA film.

A second examination was made two days later, and that film shows a definite blunting of the right costophrenic angle. This may be the film to which the protocol refers. To prove the presence of fluid without tapping the chest, a lateral decubitus film of the chest may be taken with the patient lying on the side in which fluid is suspected. The x-ray film is placed against the anterior chest wall, and the x-ray tube is at a right angle posterior to the patient. This film shows a hazy increase in density along the periphery of the entire right lung field and indicates considerable fluid in the right pleural space.

Dr. Hardin: The patient was treated with fluids, insulin, and glucose for her acidosis and apparently was rather easily brought under satisfactory management and control. She was given antibiotics, but apparently this part of the treatment was not considered satisfactory, since shortly it was changed and then changed again to much larger doses of penicillin and streptomycin. Diuretics were given sparingly because, I suppose, of the kidney disease. She finally coughed up some "chocolate" colored sputum; I suppose the chocolate refers to old blood, such as is coughed up from lung abscesses, particularly those in the lower part of the lung. Thoracentesis was done, and 1000 cc. of exudate was removed. The blood urea nitrogen and creatinine continued to rise, and the patient died on the 15th day of her hospitalization.

I think that there are several things that can be

said about this patient. First of all, I might hazard the diagnosis now. She had diabetes mellitus, and she had a macrocytic anemia, which we may call pernicious anemia. I believe that she had a lung abscess and that she had kidney disease on the basis of degeneration due to or accompanying diabetes. Whether or not this was Kimmelstiel-Wilson's disease or arteriosclerotic kidney disease is difficult to say—impossible, I believe, clinically. But if one had to choose, one would choose Kimmelstiel-Wilson's disease.

A lung abscess in a diabetic brings up several questions. These people are known to be susceptible to tuberculosis, but the x-ray films are not those ordinarily associated with that disease. I would guess that this was probably a pyogenic abscess on the basis of pneumonia. One cannot rule out the bizarre types of lung abscesses due to right-sided endocarditis or metastatic neoplasm, but there is nothing in the protocol to lead one to those diagnoses.

There are some peculiar things about this patient, however, that I think need to be mentioned. These relate to the combination in a single patient of pernicious anemia and diabetes. This is not a commonly encountered combination, but it does occur occasionally. I think that there are some things that are worth speculating about, and that one of them is the relationship of pernicious anemia to the development of degenerative lesions in the diabetic. The characteristic vascular degenerative lesions occur in the retina and in the kidneys; and these are—in the beginning, at least—small capillary aneurysms. They are usually seen in patients who have had diabetes for a rather protracted period of time, the average time for clinical appearance being 13½ years. In this patient, who developed severe degenerations in less than nine years, we have to say that certainly they developed in less time than average.

If one goes to some of the experimental work that has been done in the field, one finds some interesting correlations concerning vitamin B metabolism and the appearance of degenerative disease. Retinal capillary aneurysms are noted in patients who receive ACTH and cortisone, whether or not these patients have diabetes. It is also known clinically that degenerative changes in the eye grounds of a diabetic are often first seen during pregnancy. Experimental work has demonstrated that rabbits given ACTH or cortisone for long enough periods of time will develop these same capillary aneurysms, both in the retina and in the kidney. It is known further, that if diabetics without retinopathy are tested with the Thorne test for adrenal function, patients without retinopathy show a hypofunction of the adrenal but those with retinopathy show more than normal function. All of this is rather tenuous evidence, but it points to a relationship between adrenal hyperfunction and the appearance of degenerative disease. The second point in this

speculation is that various vitamins of the B complex are known to be intimately related with metabolism of carbohydrates and the formation of steroids in the body. For instance, from clinical experience (it is empirical) we know that some diabetics who are given large doses of vitamin B-complex are able to get along on much smaller doses of insulin than they would otherwise require. The question of B-12 metabolism in diabetic retinitis or kidney disease has also been studied, and it has been shown that animals receiving cortisone will excrete a large amount of the test dose of vitamin B-12 given to them. Now, if a relationship exists between retinitis and adrenal hyperfunction and if there is greater excretion of Vitamin B-12 when there is adrenal hyperfunction, then the diabetic patient with retinitis should excrete a larger amount of a test dose of B-12. This hypothesis has been tested, and the phenomenon has been found to occur, but unfortunately it does not happen universally. Not all patients with retinitis will excrete the larger part of doses of B-12. However, if an animal is made vitamin B-12 deficient by being given a deficient diet and then challenged with ACTH or cortisone, this animal will develop retinal lesions. This animal is normal so far as carbohydrate metabolism is concerned. It would seem, then, that there is a cross-roads where adrenal steroid formation and action, vitamin B metabolism, and the pathogenesis of the vascular degenerative lesions of the diabetic meet. How would we relate this possibility to the patient? Well, here I am indulging in pure speculation, but I think it is interesting to note that this patient was not in trouble until she became pregnant. Pregnancy is marked by hyperactivity of the adrenal. However, this patient's pregnancy, being tubal, was extremely short in duration. Afterwards, however, she had a severe infection and acidosis, so that perhaps she was in a stress situation. We do know that she developed vascular lesions much earlier than the average. We might speculate as to whether or not at this time, when she was short of B-12 in the tissues at least (as was clinically evident because she developed macrocytic anemia which later responded to B-12) and when she may have developed hyperfunction of the adrenal, she may not have started developing vascular lesions, and hence that they made their appearance clinically at an earlier time than one would usually expect. Then, we turn this very useful speculation around and say that after she had developed kidney lesions she was unable to retain B-12 and excreted it. Hence, in spite of the fact that she had what we assume to have been adequate treatment for her anemia, she came into this hospital anemic. Thus with this speculation, one can wriggle around and explain some of the things which seem to be strange. One is the early development of her vascular lesions; and a second is the failure of her anemia to respond to what should have been adequate treat-

ment. All of this, of course, rests upon the diagnosis originally made. Not wishing to be accused of throwing up a smoke screen, I would like to repeat the diagnosis—diabetes mellitus with degenerative disease of the kidney—probably Kimmelstiel-Wilson's disease—pernicious anemia, and lung abscess.

Dr. Jack M. Layton, Pathology: An x-ray film was taken before the autopsy was begun, and I will have Dr. Forbes show that to you at this time.

Dr. Forbes: This film, taken after the thoracentesis mentioned by Dr. Hardin, shows numerous fluid levels in the right hemithorax. There is partial collapse of the right lung. The upper lobe is still partly expanded, and throughout it, there are mottled areas of radiolucency which seem to signify areas of breakdown—multiple honey-combed areas within the consolidated lobe. The left lung field still remains clear.

Dr. Layton: At autopsy the body tissues were edematous, 400 ml. of ascitic fluid being present in the abdominal cavity, 800 ml. of fluid remaining in the right pleural cavity, and 300 ml. in the left. The lower lobe and middle lobe of the right lung were collapsed. In the right upper lobe, an abscess 3.5 cm. in diameter contained greenish-yellow, foul-smelling, semi-fluid material; and it was surrounded by rather extensive necrotizing pneumonitis. Severe, necrotizing, sloughing ulceration was present in the trachea; and in some areas there was actually destruction of the tracheal cartilages by this inflammatory process. Each lung was of approximately normal weight, so that there was no appreciable amount of edema fluid in the lungs. The spleen was enlarged to about twice normal size, and it contained an organizing infarct and some scattered calcified tubercles. The liver was slightly enlarged and also had some scattered tubercles in it. The mucosa of the stomach and the esophagus were pale and atrophic, although the microscopic sections were not especially striking in this regard. The pancreas was smaller than normal, but the usual architectural pattern was discerned. Aldehyde fuchsin staining of the pancreas, following permanganate oxidation, revealed essentially complete degranulation of the beta cells of the islands of Langerhans. Both kidneys were enlarged, the right weighing about 250 grams and the left about 300 grams. The cortical architecture was somewhat obscured, but there was no evidence of abscess, necrotizing papillitis, or neoplasm. Microscopic examination revealed severe renal arteriolosclerosis with moderately well-advanced intercapillary glomerulosclerosis. The structural changes encompass both the peculiar spherical hyaline masses in the central portion of the glomerular lobules described by Kimmelstiel and Wilson, and the diffuse intercapillary sclerosis described by Bell. Frequently a glomerulus shows both nodular and diffuse lesions. There is also severe hyaline thickening of

the glomerular afferent arterioles. Variable degrees of tubular degeneration occur.

Candida albicans was cultivated from the lung abscess, the wall of the tracheal ulceration, and the splenic infarct. Staining by the periodic acid-Schiff method demonstrated *C. albicans* in the tissues, too. *E. coli* and beta hemolytic *Streptococci* were cultivated from the lung abscess, and hemolytic *Staphylococcus aureus* from the spleen.

In most instances *Candida* infections are superficial and mild, and the organism is frequently found as a secondary invader in pathological processes initiated by other pathogenic organisms or neoplasm. Yeast-like fungi, particularly *C. albicans*, have been identified, however, as the primary causative agents of mycotic infections of the skin and nails, bronchitis, pulmonary infections, thrush, vaginitis, mycotic endocarditis, meningitis, and generalized systemic infections.

Because *C. albicans* is found commonly in the mouth and in the tracheobronchial tree, one is always a little reluctant to assign a causative role to it. In this particular case, the organism was found in association with the extremely necrotizing lesions in the trachea, in the tissues comprising the wall of the lung abscess, and in the splenic infarct. We consider this case to represent an instance of visceral moniliasis which developed in a woman who had diabetes mellitus.

Dr. William B. Bean, Internal Medicine: Was the stomach normal? Was there any atrophic gastritis?

Dr. Layton: The prosector noted that the stomach mucosa and esophageal mucosa were pale and atrophic, but the sections are not particularly striking in that regard.

Dr. Robert L. Jackson, Pediatrics: Was there any relationship between the fungus infection and the use of antibiotics?

Dr. Layton: In this particular case I believe that there was very little, because, so far as I can determine, the first x-ray films that Dr. Forbes showed us were taken before she had had antibiotics; and apparently she had the lung abscess then. I believe that diabetes mellitus was more of a predisposing factor to the *Candida* infection in this particular case. But the point which Dr. Jackson raises is an important one. Since the advent of antibiotic therapy, especially with the broad spectrum antibiotics, there has been an increase in the number of cases in which moniliasis has complicated the primary disease. This has also been true of other mycoses. We have had at least one other case recently in which a *Candida* species, not *C. albicans* but probably *C. tropicalis*, which is said to be non-pathogenic in the human host, was the causative agent for pulmonary abscess in a patient receiving intensive broad-spectrum antibiotic therapy.

Dr. Hardin: Were there any changes in the adrenals?

Dr. Layton: No significant anatomical abnormality was noted.

ANATOMICAL DIAGNOSES

Moniliasis due to *Candida albicans* involving right lung, trachea, and spleen.

Diabetes mellitus with:

a) degranulation of beta cells and partial hyalinization of islands of Langerhans.

b) arteriolonephrosclerosis, severe.

c) intercapillary glomerulosclerosis, nodular and diffuse types (Kimmelstiel-Wilson-Bell disease).

Old, healed, calcified miliary lesions (probably tuberculous) involving liver, spleen, kidneys, and hilar lymph nodes.

Infarct, organizing, spleen.

Nodular goiter with degenerative changes.

Cardiac hypertrophy.

Fibrosis of mitral valve leaflets.

Dilatation, right ventricle of heart.

Dr. Charles D. May, Pediatrics: I would just like to supplement Dr. Hardin's speculation concerning the anemia. Inasmuch as the metabolism of vitamin B-12 and folic acid appears to be the same in infants and children as it is in adults, I presume that this is permissible. One must recall that a megaloblastic marrow is more specifically a revelation of a deficiency of folic acid or its derivatives than of a deficiency of vitamin B-12. In pregnancy and in severe infections, one may have a deficiency of folic acid and megaloblastic anemia, and in pregnancy this anemia is characteristically unresponsive to vitamin B-12. Likewise, in some of the infections it may be unresponsive. So it is conceivable that this individual had the folic acid deficiency found in megaloblastic anemia of pregnancy and failed to respond to vitamin B-12 on that account. Subsequently, she reaccumulated folic acid compounds in her liver, as one does characteristically following the delivery of the fetus. The megaloblastic anemia of pregnancy is a self-limited disease and will correct itself as the compounds reaccumulate. Subsequently, if vitamin B-12 were given, it would be possible for it to be effective in influencing the marrow if she had truly pernicious anemia as well.

In a patient with pernicious anemia, if one blocks the action of the folic acid compounds with an antagonist such as aminopterin, one cannot then relieve the megaloblastosis of pernicious anemia with vitamin B-12. One must have adequate stores of active forms of folic acid before vitamin B-12 can be effective in relieving the megaloblastosis. I think some such simultaneous deficiency of folic acid and of B-12 in this individual, with subsequent reaccumulation of folic acid later on, would have accounted for the sequence of events in this patient.

We do not know, of course, how vitamin B-12 influences the metabolism of folic acid compounds

so that it can be effective in pernicious anemia. In the experimental animal, pure deficiency of vitamin B-12 does not lead to megaloblastic anemia.

Dr. Henry E. Hamilton, Internal Medicine: Has it been shown that folic acid deficiency is truly the responsible factor in anemia of infections?

Dr. May: Occasionally in the course of infections, a megaloblastic anemia will develop. The term "anemia of infection" refers not to a megaloblastic reaction in the marrow, but to a rather nondescript type of anemia. In the presence of infection this is not influenced by any of the known hemopoetic agents. Infection can cause marked depletion of folic acid compounds in the liver. In the experimental animal it is possible to produce a megaloblastic type of anemia with infection, but this is not to be confused with the problem to which Wintrobe and Cartwright* have devoted themselves, namely the ill-defined anemia of infection.

* Cartwright, G. E., and Wintrobe, M.M.: Anemia of Infection, *Advances in Internal Medicine* ed. by Wm. Dock and J. Snapper, 5:165-226, (Chicago, The Year Book Publishers, 1952).

SAN FRANCISCO AND HONOLULU PLANE TRIP

The Chicago Medical Society offers an all-air transportation plan to the AMA San Francisco meeting and a tour of the Hawaiian Islands afterward. The trip will leave Chicago, by DC6, at noon on Sunday, June 20, and flying non-stop, will reach San Francisco the same day. It will leave at midnight June 25 from there to Honolulu. Following a tour of the islands by air and limousine, the party will return to the plane at midnight July 4, stop only at San Francisco on the return flight, and reach Chicago on July 5.

A few reservations are still available. Those interested are invited to correspond with Elmer V. McCarthy, M.D., Transportation Chairman, Chicago Medical Society, 86 East Randolph Street, Chicago 1, Illinois.

HYDROCARBONS MAY CAUSE LUNG CANCER

Study of cancer-producing hydrocarbons in urban atmosphere and of their possible connection with lung malignancies is urged by Dr. Paul Kotin *et al.*, of Los Angeles, in the February issue of *ARCHIVES OF INDUSTRIAL HYGIENE AND OCCUPATIONAL MEDICINE*.

About half of the mice whose skin Dr. Kotin painted either with chemicals removed from the Los Angeles air or directly from motor exhaust products developed tumors after a year and a quarter, and in half or more of the cases, he proved that the tumors were malignant. None of the mice in his control groups developed tumors.

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A NEW OFFICIAL YEAR STARTS

New officers have been installed and new committees will be charged with carrying on the work of the Society for another year. Gone, probably forever, are the days when an annual meeting was a cut and dried affair with no momentous question facing the profession. For more years than we like to think of, there have been important and often vexing problems confronting us on which some sort of policy must be established. There has been no "status quo." Rather, the Society has had the responsibility of guiding the profession carefully and conscientiously toward harbors of better medical care for the people, easier methods of payment for medical care, improved physician-patient understanding, higher medical standards, and better distribution of medical service.

The past 15 years have witnessed the outstanding and gratifying growth of Blue Cross and Blue Shield; the depletion for four years of the medical manpower of the state by the armed services of our country; the unselfish and unstinted service during that period of those doctors not eligible for military service; the construction of many new county hospitals; the loss of two deans of our College of Medicine; the cooperation of the Dean's Committee during several trying years; the procurement of Dr. Norman B. Nelson, the new head of the College, whom we all heartily welcome to Iowa; the initiation of the preceptor system; the shift in emphasis from specialized medicine to general practice; and last but not least, the constant danger or threat of governmental entry into the field of medical practice. All of these things

have intruded as extraneous factors into the concerns of practitioners of medicine.

Just as the United States can no longer exist as an isolated nation, unconcerned with matters affecting the rest of the world, so can the individual physician no longer practice medicine without some consideration of economic and sociologic problems. In the past 15 years, the membership of the State Society has remained very close to 2,500 physicians. In 1939 we had nine standing committees with 35 members, ten special committees of 43 members, and two committees of the Council with nine members, making a total of 87 physicians, exclusive of officers, working on State Society affairs.

In 1944 we had nine standing committees with 35 members, ten special committees with 43 members, and four Council committees with 17 members, for a total of 95 physicians. That was a war year, when we might have expected less activity, but a glance at the record will show that those were functioning groups.

In 1949 we had six standing committees with 25 members, and 11 special committees with 67 members, for a total of 92 workers.

As we start our new official year, we have again nine standing committees, with 19 subcommittees including about 135 members, and eight special committees of 33 members, for a total of 168 physicians, exclusive of officers.

Each year, as a new president has assumed office he has given much thought to the problems confronting the profession at that particular time and has endeavored to secure the help of physicians willing to serve as committee members. It is noteworthy that for the most part, physicians accepting appointment on committees have sacrificed their time to attend meetings and to work on Society projects when requested. Special gratitude is due to the men who have traveled from the far corners of the state, in good weather and bad, for that purpose. Comprising, as they do, about six per cent of the Society's membership, they have carried the load for their colleagues. They have lent every effort to publicize what they have tried to do so that all members would know the problems and be able to arrive at solutions in the business sessions of the Society and its component county societies.

We stand where we are today because of the time, the thought, the work, and the effort of those who have gone before us. Our progress in the future will be determined by the same willingness of spirit and the same loyal devotion of those now called upon to serve. Surprisingly few men have accepted office in the Society with personal enhancement as an objective. Almost without exception, they have accepted the responsibilities and worked steadfastly for the benefit of the profession.

Each year in April a president relinquishes the reins of office; each year a new president assumes the burden and the honor, for both burden and

honor it is. To our retiring leader we should express our appreciation and gratitude; and to the incoming one we should extend our cooperation and understanding. Both merit these considerations.

THE GENERAL PRACTITIONER

At long last, the general practitioner is again coming into his own. There has been an increasing awareness of the need for family physicians to provide continuity of medical care. At the same time, developments in social and behavior fields have called attention to the need for care of the patient as an individual whose personal problems sometimes are the result and at other times are one of the causes of his physical disorder. Physical and mental disorders infrequently have a single cause, and almost never a single remedy. Not just a specific pathogen, but psychological, social and genetic factors must be considered. It therefore follows that preventive medicine is an important factor in total care. Because of his close contact with patients, the family physician is in the best position to practice medicine from this preventive viewpoint.

The physician of today must be aware not only of the latest advances in therapeutic medicine but of the facilities for diagnosis and treatment which can be made available for patients' social ills. For that purpose, each member of the Society is being furnished a copy of A HANDBOOK OF RESOURCES AVAILABLE TO PHYSICIANS, from which he can get information on the many voluntary and official agencies that specialize in the alleviation of such difficulties.

New emphasis is now being placed upon the preparation of general practitioners. Our own medical school and teaching hospitals have established general practice residencies and have organized special student training programs. Senior students have been given opportunities for preceptorship training during the summer months. Students are being taught to regard patients as individuals, rather than as cases of particular diseases. Thus the physician-patient relationship is being dignified.

As the concept of providing total medical care evolves, the family physician, as the coordinating member of a practicing team, is enabled to make his greatest contribution to the practice of medicine.

OBLIGATIONS

Doctors have many obligations, and they all too often forget some of them in their pursuance of the practice of medicine. After the work day is through, there is but little time for them to fulfill their family obligations—that of being good fathers and husbands. There is little time for a doctor to be a good citizen by aiding in some community endeavor. There is little time for him to

satisfy his obligation to himself—to keep his body and mind up to par through participation in some active form of enjoyment—some hobby, if we may use that shop worn term. Finally, he has little time to spare in fulfillment of his obligation to the profession—that of keeping up with medical progress, by study and attendance at medical meetings.

We doctors owe it to our profession (and to ourselves) to attend at least one high quality medical meeting per year. This meeting should be of state, regional or national caliber. Attendance at these meetings serves to shake us out of the complacency engendered by everyday practice. At the meetings we realize that other men are doing things to promote medical progress while we sap the benefits of their labor. We realize once more that these doctors are thinking way ahead of us—that we have been asleep and that we had better do a little studying on our own when we get home. Our eyes are opened when we become cognizant once again that medicine is not as simple as we had believed.

Attendance at meetings affords opportunities for getting reacquainted with old friends and teachers—of widening our vista by absorbing their ideas. And in addition, practical and philosophic discussion with old friends is pleasure beyond measure.

Finally, when we go away to a meeting we get away from "the cares that be." We are able to think more sanely about problems besetting us at home—problems which we can neither think clearly about nor solve when we are in the thick of practice.

Let's make a resolution to attend one good state, regional, or national meeting a year!

THE DIAGNOSIS OF PIN WORMS

Pin worm infection (*Enterobius vermicularis*) is very common in children. The reported incidence varies from 1 to 100 per cent. This tremendous variation in incidence is due to several factors. First, the highest incidence is usually based on institutional surveys in orphanages or hospitals for the feeble minded. Studies based on the general pediatric population show a much lower incidence. Second, the worms do not usually appear in the stool, and diagnosis depends on finding the eggs after they have been deposited on the perianal skin by gravid worms. This oviposition usually occurs at night. The peculiarity of the worms in making their exit from the gastrointestinal tract to lay their eggs around the anus is responsible for the usual symptoms such as itching and irritation around the anus and perineum. Third, the diagnostic procedures for pin worms have not been as satisfactory as one would like them to be.

One of the common ways of establishing the diagnosis is for the mother of the child to see the

female worms about the anus of the child. These worms, although small, are visible to the naked eye. They are most likely to be seen if looked for after the children have gone to bed. Occasionally, the worms may be found in the children's sleeping garments. Male worms are never seen, for they are too small to be visible except through a magnifying lens.

The laboratory procedures most commonly used in diagnosis are the swab techniques of Hall and Graham. The first swab used was the cellophane one. A piece of cellophane was wrapped around a glass rod and held in place with a rubber band. This cellophane swab was then used to rub over the perianal and perineal areas. The cellophane was then removed, spread over a glass slide and examined microscopically for ova. An improvement on this method was that of placing a piece of Scotch tape over a tongue blade with the adhesive surface outward. The tape was held in place with the fingers and the penial and perineal skin swabbed thoroughly. The cellophane was then placed on a glass slide and examined microscopically. These methods did not lend themselves to concentration of the material. In some cases, concentration is not necessary, for the infection may be heavy, with numerous eggs present. In others, however, there are only a few worms, with few ova present. The number of worms recovered from an infected patient during treatment may vary from 1 to 4,958.

Recently, a new technique has been developed by Markey which is simple and permits concentration of the material. In this technique, cotton-tipped applicators are dipped into a warm mixture of one part vaseline and three parts paraffin. The paraffin solidifies on cooling. These swabs are used to swab the perianal skin, and the swab should also be inserted into the rectum for approximately one-fourth inch. It is then dropped into a test tube containing 4 to 5 cc. of xylol, which dissolves the paraffin and vaseline. The tube is then centrifuged and the sediment examined microscopically. A recent survey on Iowa children in a pediatric health center for low income families revealed an incidence of 24 per cent, using this method.

Several examinations should be performed before the patient is declared negative, for multiple examinations will yield a higher incidence of positives, because of the periodicity of the infection which results from the life cycle of the worm. The interval between ingestion of eggs and their appearance on the perianal skin is variously given as from 15 to 28 days. Eggs will appear for a period of about one week, and it is during this time that reinfection occurs. After that week, once again examinations may be negative for eggs until the new generation of worms reaches maturity. This cyclic nature, however, tends to be lost in well established infections. Thus, it is recommended that weekly examinations for a period of six to seven weeks be carried out.

Another way of making the diagnosis is to find the worms in sections of surgically removed appendices. Schenken and Moss in 1942 reported a series of appendices in which the appendiceal content was examined by concentration techniques. On white females, ages 5 to 9, there was an incidence of 72.4 per cent.

There is good evidence now that pin worm infection is responsible for 5 to 10 per cent of the cases of acute appendicitis in children.

After treatment, follow-up examinations should be performed. Reinfection is very common, and the drugs available for treatment are not always effective. There are several new drugs, however, that are much better than those which have been available in the past.

EDUCATIONAL FUND NEEDS ADDITIONAL MONEY

Applications for loans from the Educational Fund of the Iowa State Medical Society are considerably exceeding expectations, and in consequence, additional contributions or investments from doctors and from other interested people are being urgently sought. When, a little over two years ago, the G.I. Bill expired, many of the students in medical school had to look elsewhere for money with which to finance the completion of their work, or to set up their practices after they got their licenses. They have composed the bulk of the applicants, but there have also been numerous requests from interns and residents.

Loans are made at five per cent interest, and when the borrower is unable to furnish collateral, the Fund achieves security by taking out a term insurance policy on him. Borrowers agree to engage in general practice for a minimum of three years, preferably in Iowa, and to begin repayment no later than the start of their third year in practice.

Those who put money into the fund have two alternatives. They may give the money outright, in which case they have the satisfaction of determining the use of some of the funds that the government would otherwise take from them in taxes; or they may invest it in the Fund at four per cent interest, repayable in ten years.

The directors of the Fund are appreciative of the cooperation which their fellow members of the Iowa State Medical Society are giving them, and they wish to make special acknowledgment of the contributions made by The Picker X-ray Company, of Sioux City, and Professional Management, Inc., of Waterloo.

A.M.A. ANNUAL MEETING
San Francisco, June 21-25, 1954.

NATIONAL HEARING WEEK

The week of May 2-8 has been designated by the American Hearing Society as National Hearing Week to bring to the attention of the public the medical, rehabilitative and welfare needs of hard-of-hearing individuals and to urge conservation measures for all other people. It is estimated that approximately one out of every ten adults and one out of every twenty children have hearing defects ranging from slight to total deafness.

The Des Moines Hearing Society, a chapter of the national organization, is interested in being a source of public information on the subject and in helping to organize conservation programs. The Society is equipped and staffed for the following sorts of work: (1) administering hearing tests and submitting results to physicians for diagnostic interpretation; (2) counseling patients on the selection of hearing aids; (3) instructing patients in lip-reading, a skill that they should learn, whether or not they have been fitted with hearing aids; (4) instructing patients in the maximal use of their hearing aids; (5) auditory training, by means of which children who have not heard before or adults who have been hard of hearing for many years learn or relearn to recognize speech sounds; and (6) providing recreation for patients whose handicap has engendered an attitude of distrust, suspicion, or unwillingness to associate socially with the people around them.

The Society is anxious to cooperate with physicians, and very greatly prefers that referrals come directly from doctors.

BETTER CASE-FINDING MAY NOT HAVE CAUSED RISE IN LUNG-CANCER MORTALITY FIGURES

"Today one can fairly say that cancer of the lung exists as a pandemic disease in North America and the industrialized countries of northwest Europe," Dr. Harold F. Dorn, chief of the Office of Biometry of the National Institute of Health, Bethesda, Maryland, told the convention of the Industrial Medical Association, on April 29.

The mortality rate for white males, adjusted for changes in age distribution, increased 1,800 per cent during the 36 years between 1914 and 1950. If one were to conclude that all of that increase reflected no more than improvements in case-finding, Dr. Dorn said, one would have to suppose that physicians at the start of the period were able to make correct diagnoses in no more than four per cent of the cases.

The relative increase, he pointed out, has been four times greater for males than for females, and it is unreasonable to suppose that physicians are able to diagnose lung cancer more easily in one sex than in the other.

NORTHWEST IOWA MEDICAL SOCIETY IS REORGANIZED

Physicians from Alton, George, Hartley, Hawarden, Inwood, Orange City, Paullina, Sanborn, Sheldon, Sibley and Sutherland met at the Community Memorial Hospital in Sheldon on March 10 to reorganize the Northwest Iowa Medical Society and to elect officers. Dr. L. J. Sweeney, of Sanborn, was chosen president, Dr. L. H. Mattice, of Sheldon, secretary-treasurer, and Drs. John Lavender, of George, F. M. Rizzo, of Sibley, and E. B. Grossman, of Orange City, vice-presidents.

Before the war, physicians from the four northwest counties of Iowa were in the custom of meeting regularly to hear addresses by prominent guest speakers.

Dr. R. N. Larimer, of Sioux City, president of the Iowa State Medical Society, was the guest of honor and spoke informally to the 23 doctors in attendance.

TRI-COUNTY MEETING

The Wayne County Medical Society was host to Decatur and Lucas county physicians at a dinner meeting held on April 1 at Humeston. The program had been arranged by Dr. R. C. Gutch, of Chariton, chairman of the Subcommittee on Veterans' Affairs of the Iowa State Medical Society, and Dr. L. B. Calbreath, of Humeston, presided.

The major subject discussed was the AMA's campaign to eliminate the treatment of non-service-connected ailments at V.A. facilities. Dr. Gutch outlined the work of his subcommittee, and Dr. Fred Sternagel, of West Des Moines, chairman of the Committee on Medical Service, described the campaign plans of the AMA. Donald L. Taylor, of Des Moines, Executive Secretary, gave a short talk on the major projects in which the State Society is now engaged.

G.P. ACADEMY MAKES IOWA SCHOLARSHIP AWARD

Gerald J. Van Leeuwen, a senior medical student at the State University of Iowa, has been granted a \$1,000 award by the American Academy of General Practice, it was announced during the Academy's annual meeting in Cleveland. He is to receive the money when he begins his general-practice residency in July, 1955.

A board, headed by Dr. Eugene Scheldrup, associate professor of anatomy at S.U.I., chose Mr. Van Leeuwen on the basis of his scholastic record. The scholarships are awarded to students in each of ten states, and two alternates are also named.

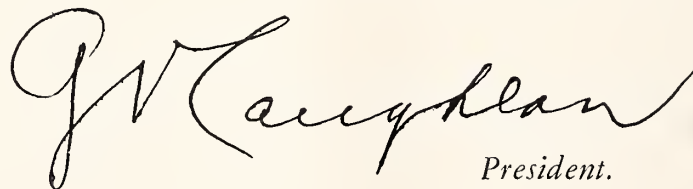
Mr. Van Leeuwen came to the University from Hull, Iowa. He is now married and makes his home in Iowa City.

President's Page

Another year dawns for the Iowa State Medical Society. It will be a momentous year, for many important problems must be met. They can be solved only by an organized, interested Society.

Every member should make this his best year by reading the journals and other publications having to do with the organizational side of medicine, by answering all mail from official sources, by attendance at county and state medical meetings, by accepting office and committee assignments, and by doing everything that he can to promote good will toward the medical profession.

This is our goal for 1954-1955. Shall we meet it?

A handwritten signature in cursive script, reading "J. W. Laughlan". The signature is fluid and elegant, with the first letters of each word being capitalized and prominent. The ink is dark and the background is a light, slightly textured paper.

President.

BLUE CROSS



BLUE SHIELD

Highlights of Blue Cross-Blue Shield National Conference of Plans, New York, April 4-8, 1954

Dr Louis A. Bauer of New York, former president of AMA, was appointed for a three year term by AMA on the Blue Shield Commission. Each year for the next two years AMA will appoint a representative to serve on this national Blue Shield body so that by 1956 organized medicine will have three representatives on the Commission.

The 1954 Conference was attended by 484 delegates representing Blue Cross and Blue Shield Plans throughout the United States, Canada, and Puerto Rico.

Annual Conference representatives from 78 Blue Shield Plans studied and endorsed the basic objectives of the President's message to Congress on health insurance matters. The Plans recognize and appreciate the sincere intent of President Eisenhower's Administration to make adequate health coverage available to more people by "encouraging and stimulating the expansion of voluntary health programs."

The Blue Shield Plans gave careful consideration to the Administration's reinsurance proposal and came to the conclusion that it may well be unnecessary with respect to Blue Shield Plans for the following reasons:

1. Blue Shield Plans have demonstrated their ability to stand on their own feet financially.
2. Since their inception, Blue Shield Plans have been underwritten and hence, in fact, reinsured by the physicians who sponsor them.
3. In but a few short years, Blue Shield Plans have made remarkable progress in both the extension of enrollment and the extension of benefits. They now have an enrollment of over 29 million people. Having come through the early critical period, there is no reason to expect that they will now need to rely upon anything other than their own proven resources as they continue to expand their operations in accordance with the reasonable expectations of the public.

The Blue Shield national advertising campaign is getting underway. Ads will appear in *LIFE*, *Look* and *SATURDAY EVENING POST*. Seventy-four per cent of the Plans are contributing to this national program to tell the story of voluntary medical-surgical prepayment sponsored by the medical profession of America.

Blue Shield Monthly Statistics

Claims Paid March 1954	\$409,115.55
Number of Claims	12,885
Enrollment April 1, 1954	439,640

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

- A DOCTOR TALKS TO WOMEN, by *Samuel R. Meaker, M.D.*, (New York, Simon & Schuster, 1954. \$3.95).
- THE HEPATIC CIRCULATION AND PORTAL HYPERTENSION, by *Charles G. Child, III, M.D.* (Philadelphia, W. B. Saunders Company, 1954. \$12.00).
- RECONSTRUCTIVE SURGERY OF THE EYELIDS, by *Wendell L. Hughes, M.D.* (St. Louis, The C. V. Mosby Company, 1954. \$8.50).
- THE 1953-1954 YEAR BOOK OF ORTHOPEDICS & TRAUMATIC SURGERY, by *Edward L. Compere, M.D.* (Chicago, The Year Book Publishers, 1953-54. \$6.00).

BOOK REVIEWS

- THE CHEST, A HANDBOOK OF ROENTGEN DIAGNOSIS, by *Leo G. Rigler*, Second Edition, (Chicago, The Year Book Publishers, 1954. \$8.00).

This is one of a series of referenced handbooks on Roentgen diagnosis. Those acquainted with the previous edition (1946) already know its use as a handy reference. The inclusion in this volume of the later advances in bronchography and vascular disorders increases its value considerably. Like the other handbooks, descriptive material is placed opposite the reproductions of the x-ray films, making for easy use.

Its greatest use will be to the student, general practitioner and those particularly interested in x-ray study of the chest.—*Noble W. Irving, M.D.*

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- LECTURES ON THE THYROID, by *J. H. Means, M.D.*, (Cambridge, Mass., Harvard University Press, 1954. \$3.00).

This little book is, as the title indicates, a series of five lectures on the thyroid that were given on unrelated occasions by an authority of renown. Dr. Means has long been recognized as a teacher in this field, and his illustrated lectures are worth reading.

The titles of the five lectures are as follows: (1) The Integrative Action of the Endocrine System, (2) The Thyroid Hormone, (3) The Use of Hormones, Drugs, and Radiations in the Management of Thyroid Diseases, (4) Clues to the Etiology of Graves' Disease, and (5) The Need for Iodine. Each lecture has a bibliography for anyone interested in the special topic.—*Arthur G. Lueck, M.D.*

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- YEARBOOK OF OBSTETRICS AND GYNECOLOGY—1953-1954 Series, by *J. P. Greenhill, M.D.*, (Chicago, The Year Book Publishers, Inc. \$6.00).

The familiar "yearbook" pattern is followed in a collection of abstracts of the more important articles in the field appearing in the world literature from July, 1952, to July, 1953, and is the immediate sequel to the 1952 volume. The articles abstracted include all phases of obstetrics and gynecology.

The abstracts are concise, the relatively few illustrations and diagrams are instructive, and the editorial comment by Dr. Greenhill is pertinent, enlightening, and authoritative.

The yearbook presents a most compact review of current trends and is well worth the reading time of anyone practicing obstetrics and gynecology.—*Richard M. Moore, M.D.*

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- THORACIC SURGERY, by *Richard H. Sweet, M.D.*, Second Edition, (Philadelphia, Saunders, 1954. \$10.00).

This second edition of a book first published in 1950 contains but few striking additions to, or alterations of, the original edition.

The book is primarily one of technics of thoracic surgery. For that reason, the material is presented on a regional anatomy basis, from the chest wall to the heart and mediastinum. No discussion of the clinical features, diagnosis, and pathology of the various surgical chest diseases, such as bronchogenic carcinoma, lung abscess, mediastinal lesions, etc. is included. The limitations of the book in this regard can be highlighted by the fact that not a single reproduction of a chest x-ray (the "Eveready Lamp" of the chest physician) is contained within its covers. However, these limitations are clearly indicated by the author in his original preface, and repeated in the text.

The many illustrations, both of anatomy and of surgical procedures, are very satisfactory; and two three-dimensional diagrams of the segments of the lung, redrawn in the second edition, are extraordinarily clear representations of a complex anatomical arrangement.

The technical information is presented very ably, and in considerable detail, as illustrated by eleven pages devoted solely to the names and pictures of the instruments used in this field of surgery.

The book is based upon the concept that "any properly qualified surgeon" can become a thoracic surgeon by learning the techniques of that specialty. Whatever the merits of this concept, the book is of definite value to those who do surgery, and holds little of interest for others.—*Daniel F. Crowley, Jr., M.D.*

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- THE ALLERGIC CHILD: A HELP AND GUIDE TO PARENTS, by *Harry Swartz, M.D.*, (New York, Coward-McCann, Inc., 1954. \$3.95).

This work is primarily designed as a guide to the bewildered parents of allergic children. The early chapters answer such common questions as what allergy is; when allergy begins in the child; and how allergy presents itself. Further discussion concerns the physician's approach to allergic states, and the aids parents must give their children. Included are explanations of various physical and medical aids which are available to the allergic individual and a glossary of terms the allergist uses.

This book would be of great value to the parent if it were used in the manner for which I am sure it was written, i.e. as a help to the parent along with the guidance and advice of the physician. But its purpose would be lost if laymen should use it as a means of self-diagnosis and self-treatment.—*M. E. Alberts, M.D.*

Iowa Academy of General Practice

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HOW TO BE A GOOD PRECEPTOR

In a few weeks the junior medical students will be starting their preceptorships with over 100 private practitioners in the state. The doctor selected to serve as a preceptor should feel honored, but he should recognize that he has the responsibility of being a teacher for a month. Every one of those 100 has what these students want and need—things the staff of a medical school find difficult doing under the ordinary college curriculum.

To help the preceptors do a better job through understanding what is expected of them, the Commission on Education of the American Academy of General Practice has formulated a list of the "Elements of a Good Preceptorship" to serve as a guide. This list is as follows:

1. Help the medical student learn about general practice by letting the student observe to begin with (most patients do not object if the student's status is explained), and by discussing the case and its implications later.

2. Help the student to understand the rationale of treating colds, headaches, backaches, boils and other common minor ailments. As mutual confidence is established, let the student diagnose and give his proposed treatment for checking.

3. Help the student in methods of greeting patients, of questioning, of listening, of examining, of discussing fees.

4. Address the student as "Doctor." It helps his ego considerably. It may take as long as a month before the student will offer an opinion, and frequently, for fear of being wrong, he will hesitate in expressing any firm opinion. Accepting him as a near-doctor creates a very friendly atmosphere. The student also appreciates a day off a week and some week-ends to himself.

5. Permit the student to make a follow-up call by himself after he has made a dozen or so house calls with you. Most students are ready for a solo call by that time, though the final decision about it must rest upon the preceptor's judgment. Some students have even made an initial call successfully. Results of the call must be reported to the preceptor for checking.

6. Permit the student to accept some responsibility. Most of them will do it well. Frequently, the student can make afternoon or evening hos-

pital rounds, attend to night emergency cases until the doctor arrives, can check on intravenous procedures, or can suture minor lacerations.

7. Discuss with the student costs of entering practice and methods of financing the practice. Students are naturally interested in such problems and are usually quite naive about fees, ethics, consultations, and, in fact, all types of professional relationships.

8. Show the student how much reliance can safely be placed in drug salesmen. The preceptor can present only his personal point of view on this matter, but that can be of great help to the student.

9. Let the student learn to apply his junior-year surgical course work by serving as first assistant in surgery. By so doing, he can obtain further practice in such diverse areas as the correct method of putting on gloves, proper aseptic technique, correct approximation of tissues, tying of surgical knots, handling of organs, and getting the feel of a living, anesthetized human body.

10. In sum, give the student the opportunity to do things, though always with supervision at hand. The over-all importance of the preceptorship lies in the fact that the student has some patients of his own for the first time, examines them, diagnoses their ailments (using laboratory and x-ray facilities as needed), and follows them through his preceptorship period in the home, the office, and the hospital. He assesses fees, charging the patients regular office-call rates to see him, just as they would have to pay any practicing physician.

Of great importance, too, are *negative* items contributing to a good preceptorship.

1. The student should not be left alone to try to cope with even the most innocuous of practices. An afternoon off, much less a week, with the doctor beyond normal phoning distance invites disaster for the entire program.

2. Observe the rules of your state concerning remuneration of the student. The preceptee is a student as much as if he were in classes. Payment of any sum not set up by the program in your state creates intense dissatisfaction among students not so paid.

3. In discussing finances, be sure that net income is made clear, if gross, clinic, and hospital income is mentioned.

(Continued on page 233)

STATE DEPARTMENT OF HEALTH

Edmund G. Zimmerman
COMMISSIONER

POLIOMYELITIS VACCINE FIELD TRIAL STUDY

On Monday, March 15, representatives from the three Iowa counties (Linn, Scott and Woodbury), which had been given final approval as Iowa areas for the poliomyelitis vaccine field-test programs, met at the State Department of Health, in Des Moines to give further consideration to the program in their counties. The Iowa State Medical Society gave its approval of the program in December, 1953. The county medical societies of the nine Iowa counties with populations of 50,000 or over which were given original consideration as field trial areas gave their approval in December, 1953 or in January, 1954. The three counties expressed a preference for the Placebo controlled type of project, wherein children from first, second and third grades would be used as test groups. One half of those volunteering will obtain the vaccine. The other half will be given a harmless material that appears identical with the poliomyelitis vaccine. No one in Iowa will know which child receives which substance until sometime after the inoculations have been completed.

The program to be carried out must have the approval and support of the local county medical groups, the school officials and all local health officials. It must be organized through the schools and very preferably done at a time when school is in session. Request forms must be signed by parents before any child will be included in the test program. Five weeks (the time between the first and third injections) will be needed, once the program swings into action. Another factor, and one of definite importance, is the need for completing the vaccinations before the time for expected seasonal increase of poliomyelitis arrives.

Since these three counties, with a combined population of 320,475, contain 12.1 per cent of the state's population, they should yield a large enough test series of volunteers to be of a definite statistical significance. Situated in three distinct areas of the state and in different trade areas, they also represent differing possibilities of poliomyelitis incidence for 1954.

County	Popula- tion of County	Children in Grades 1-3 inclusive in public, private & parochial schools				GRAND TOTAL
		1st grade	2nd grade	3rd grade	TOTAL	
Linn	109,379	2,374	1,795	1,806	5,975	
Scott	105,426	3,127	1,940	1,862	6,929	
Woodbury	105,670	2,517	1,736	1,965	6,218	19,122

These figures are those obtained from the office of the Iowa State Department of Public Instruction for the school year 1952-1953.

The vaccine to be tested is Salk's material. It is not an egg preparation. It is chemically killed and contains substances which, when injected, produce protective antibodies effective for all three strains of the poliomyelitis virus. The Salk vaccine, produced and sponsored by the National Foundation for Infantile Paralysis, will be available in 1954 only in those counties participating in the field trials and only to those children volunteering. In other words, poliomyelitis vaccine is as yet not available commercially. It is available only for investigational use "on a controlled basis."

The vaccine will be given by local physicians who volunteer their services. Each child is to receive three injections. The schedule of injections is as follows: the second is given one week after the first; the third follows four weeks after the second. Each injection is 1cc of the vaccine. Children who have had an attack of poliomyelitis may be given the vaccine, since an attack of poliomyelitis produces immunity only to the strain of the organism producing the attack.

The Salk vaccine to be used will have been tested in three different laboratories—the commercial laboratory where it is processed, Dr. Salk's own laboratory and the National Institutes of Health Laboratories. Any vaccine that does not pass all tests satisfactorily is automatically discarded. This is a process routinely used in testing any biologic material before its use is permitted.

The three Iowa counties are planning to start their vaccine program the week of April 19.

RHEUMATIC FEVER AND HEART DISEASE

It is now well established that the heart is damaged to a greater or lesser degree by every attack of rheumatic fever. This damage is generally permanent and serious; and although this damage may not be so great when conditions are favorable, yet severe and fatal cases occur with sufficient frequency to give to rheumatic fever an important role in the causation of heart disease. Ninety per cent of all heart disease in patients under 30 years of age is caused by rheumatic fever. While rheumatic fever is much less frequent after 50 years of age, it does occur, and then has a higher death

rate. Rheumatic fever causes a special form of valvular heart disease called stenosis, or narrowing of the aortic valve. When this condition is found, it is evidence of the patient's having suffered one or more bouts of rheumatic fever.

Rheumatic fever is grouped with the streptococcal infections, and usually begins with a sore throat, as an acute tonsillitis or acute pharyngitis. This may subside under proper treatment in eight to ten days, with disappearance of fever and other signs of illness. A week later the fever may return with painful swelling of the joints, muscular pains and other signs indicating an attack of rheumatic fever. This may subside in one or two weeks, or may continue for many weeks.

Forty per cent of all cases experience a recurrence. The heart damage may not be evident in the first attack, but generally is recognized after a recurrence.

Through the use of new remedies such as penicillin, the acute onset is shortened, and rheumatic fever is often overlooked.

Rheumatic fever occurs in several forms. One of its major types is chorea or St. Vitus dance, which is rare under two years and after 30, being most frequent between eight and fifteen years. Another less frequent form occurs as painful hard swellings, called rheumatic nodes, appearing under the surface of the long bones.

In an extensive survey made by the U. S. Public Health Service a few years ago, 30 per cent of cases of rheumatic fever resulted in heart disease, and 16 per cent in chorea.

Unfortunately, there is no adequate method for the prevention of the first attack of rheumatic fever. Prompt attention by a physician may distinctly limit or shorten the initial sore throat or the rheumatic fever attack.

The disease has been noted more frequently in crowded households, and in the larger rather than the smaller cities. Impaired nutrition and unsanitary environment are factors to be considered.

During the war period, large groups of military personnel were given a form a preventive treatment consisting of small daily doses of penicillin for a year or longer following recovery from the acute sore throat or rheumatic fever, with practically no recurrences developing during that period of preventive treatment.

Rest and prompt medical attention are of utmost importance. If rheumatic fever can be controlled, heart disease in the young adult will eventually disappear.

ANNUAL RENEWAL OF LICENSE

According to law (Section 147.10, Code of 1950 as amended), every license to practice medicine expires on June 30 of each year, and furthermore, the law requires that application for renewal, on the prescribed form and accompanied by the \$3

fee, must be made at least thirty days prior to that date.

Each year, the State Department of Health notifies each licensee of the expiration of his license and provides him a blank for his renewal application. All changes of address must be forwarded to the State Department of Health promptly, so that those notifications and blanks may not be delayed in reaching the licensees.

HOW TO BE A GOOD PRECEPTOR

(Continued from page 231)

Do not let students sign prescriptions or write unconfirmed orders. While students are capable of doing a great deal, they are still learning to practice medicine, and are neither legally nor educationally ready for the complete actuality.

5. Every student should be informed of the perils of returning to general practice after only one year of hospital training. The Academy of General Practice recommends at least a one-year residency in general practice after the internship.

We hope these rules, added to those furnished by the University of Iowa, will clarify understanding of the preceptor-student relationship. We sincerely desire this program to be successful in Iowa, as it has been elsewhere. It can be of inestimable value to a student, and it furnishes the general practitioner a fresh view of medical education.

Last, but not least, one hour of formal credit is given to Academy members for each week they have these students.

MORBIDITY REPORT

Disease	Mar. 1954	Feb. 1954	Mar. 1953	Most cases reported from these counties
Diphtheria ...	1	1	1	Chickasaw
Scarlet Fever	361	243	256	Clinton, Mahaska, Polk, Warren
Typhoid Fever	0	0	1	.....
Smallpox	0	0	0	.....
Measles .....1,102	665	1,872		Cerro Gordo, Clayton, Har- rison, Pottawattamie
Whooping Cough	9	28	9	Buena Vista, Clinton
Brucellosis ...	13	18	21	Scattered—1 to a county
Chickenpox ..1,140	1,003	706		Allamakee, Des Moines, Dubuque, Linn
Meningococcus Meningitis .	3	5	2	Linn, Mahaska, Shelby
Mumps	773	513	202	Des Moines, Pottawattamie, Story
Poliomyelitis	4	9	2	Delaware 1, Keokuk 1, Story 2 (1 paralytic, 3 unspecified)
Rabies in Animals..	23	25	20	Scattered 1 or 2 to a county
Infectious Hepatitis ...	483	445	144	Boone, Lee, Scott, Webster
Tuberculosis	59	55	71	For the state
Gonorrhea ..	52	55	64	For the state
Syphilis	129	112	194	For the state
Histoplasmosis	1	0	0	Poweshiek

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Publications Chairman*, Dexter, Iowa

President—MRS. EDWARD B. HOEVEN, 224 E. Alta Vista St., Ottumwa

President-Elect—MRS. LESTER R. HEGG, Rock Valley

Secretary—MRS. ROBERT P. MASON, 5818 Chamberlain Drive, Des Moines

Treasurer—MRS. HOWARD SMEAD, 3333 Grand Avenue, Des Moines

NINTH NATIONAL RURAL HEALTH CONFERENCE

This year the National Rural Health Conference was held in Dallas, Texas, March 4-6. This conference is sponsored by the AMA and a meeting together of leaders of Rural organizations, Health Educators and medical doctors. As your President-Elect it was a real privilege to attend all the conferences. On the morning of March 4 at seven thirty I left Sioux City via air and at two thirty p.m. of the same day I was in the conference in time for the opening session. It isn't difficult to understand why national conferences are becoming more numerous and why world problems have become our country's problems when such great distances can be covered in such a short space of time.

The program theme was "Let's Put More 'U' in Community." Presentations of subjects outlined in the program were given by men and women who are specialists in their respective fields of study and each presentation was followed by a discussion period devoted to area problems. "Arousing Community Interest in Better Health Facilities," "The You in Nutrition," "Health Insurance—What, How and Why," "Soil, Civilization and Our Health," etc., were some of the subjects followed. There were many questions for panel members to solve, but, as far as I could see, every problem revolved around the "Education of the Individual."

Perhaps the outstanding event of the meetings occurred on the last day at the luncheon for special guests in the beautiful Sky Room of Hotel Baker, with our National Auxiliary President, Mrs. Leo Schaefer, of Salina, Kansas, and Dr. Edward McCormick, of Toledo, Ohio, the National President of the American Medical Association, as guest speakers. Mrs. Schaefer stressed the need for more safety education due to rising death rate and crippling of our people and tremendous economic losses—all due to carelessness and ignorance. Dr. McCormick said that the progress of medicine in America during the past 25 years was almost inconceivable. In reference to the Salk vaccine he stated that the AMA is anticipating an end of Polio. In regard to cancer Dr. McCormick added, "I feel we shall see the end of cancer in five or six years. Hundreds of thousands of cancer cases are being cured through radiation, radical

surgery, and the use of isotopes—means which a man would have been called crazy had he attempted to use them a few years ago." He stated also that the AMA, along with the National Foundation for Medical Education, last year put more than \$10,000,000 into medical schools to avoid the threat of federal subsidizing of medical education. "Only 20 per cent of the funds required to operate medical schools comes from tuition," he asserted.

In conclusion, I wish to express by appreciation for the honor of representing the Auxiliary and to thank the Trustees of the Iowa State Medical Society and the others who made this trip possible for me.

The 1955 National Health Conference will be held in Milwaukee, Wisconsin.

MRS. LESTER HEGG
President-Elect

REQUESTS FROM THE AMA

With the approval of the American Medical Association, the Board of Directors of the Woman's Auxiliary is recommending that all Auxiliary members *as individuals*, should support two important projects being promoted by (1) The National Foundation for Infantile Paralysis and (2) The American Heritage Foundation:

VACCINE VALIDITY STUDY

Sponsored by the National Foundation for Infantile Paralysis

A nationwide study to determine the effectiveness of a polio vaccine in preventing paralytic polio got underway in one or more southern states (approximately 200 counties) during the week of February 8, 1954, and will end June 1, 1954. During that time 500,000 to 1,000,000 school children of the second grade will have taken part in this study. Participation will be on a voluntary basis, provided that the child's parents or legal guardians consent. The study will be conducted by the National Foundation with local health officers in charge. Local physicians will administer the injections.

Volunteers from the National Foundation's 3,100 chapters, covering every county in the United States, will help in organizing and manning the study in local areas. Auxiliary members were

called upon to assist in this project in this capacity. As stated above, the American Medical Association feels that Auxiliary members can make a very worthwhile contribution to this important and meritorious project by participating as individuals on a local level with the groups who are serving as volunteers in this study.

CRUSADE FOR FREEDOM

Adopted and promoted by the American Heritage Foundation

The Crusade for Freedom is the officially adopted program of the American Heritage Foundation for the year 1953-54. Its objective is to act as a public information agency and principal fund raiser for the National Committee for a Free Europe, Inc. Through Radio Free Europe and other facilities, the public funds raised by the Crusade will be used to conduct programs of hope, aid, encouragement and information to and on behalf of the captive countries of Eastern Europe. Radio Free Europe programs are sent behind the Iron Curtain . . . and they get there. They are designed to refute Communist lies and to bolster the morale of the oppressed citizens. By making these broadcasts possible, The Crusade for Freedom gives every American the opportunity and privilege of participating in what the American Heritage Foundation regards as one of the most exciting, inspiring and successful offensives being conducted anywhere.

The Crusade for Freedom program got under way in February, 1954, and the AMA advisory council to the Woman's Auxiliary approved of the participation of the Auxiliary in this notable and outstanding project. As an organization, the Auxiliary can assist in the educational aspect of the program. As individuals, Auxiliary members can contribute in a financial way.

The American Heritage Foundation is a non-partisan, non-political educational organization functioning in the interests of a higher level of citizenship throughout the United States. It sponsored the famous Freedom Train and the recent non-partisan Register and Vote Campaign. A board of trustees, consisting of leaders in fields of labor, industry and education, heads the Foundation. Henry Ford II is chairman of the Board of Trustees, and Thomas D'Arcy Brophy is the Foundation president. It has the wholehearted support of President Eisenhower, who is a former trustee.

Members who desire to receive material for a Speakers Bureau or for circulation in their communities may write to Crusade for Freedom, 345 E. 46th Street, New York 17, New York.

WHO ANNUAL REPORT STRESSES FINANCIAL DIFFICULTIES

The World Health Organization's annual report for 1953, noting the completion of five years of activity, cites "extremely serious and prolonged

financial crises" during the year. Despite them, however, WHO claims these accomplishments: (1) assistance to 74 countries in over 330 health projects, (2) widening of communicable disease programs that include malarial control in 21 nations, (3) examination of 15 million persons and treatment of 4 million of these for yaws or venereal infections, and (4) assistance to 24 countries in starting or extending tuberculosis control projects. WHO also granted 894 fellowships to health workers for advanced study abroad in addition to local or regional training seminars. World Health Day, marking the formation of WHO, will be observed April 7. The annual report is available at \$1.25 a copy at Columbia University Press, 2960 Broadway, New York 27, N. Y.

IOWA HOSPITALS APPROVED FOR TREATMENT OF CANCER PATIENTS

An article appearing in the January WOMAN'S HOME COMPANION entitled "How You Can Double Your Chances Against Cancer" has been denounced by Dr. E. G. Zimmerer, Iowa commissioner of health and chairman of the professional education committee of the Iowa division of the American Cancer Society.

In a letter to hospital administrators and chiefs of staffs of Iowa hospitals, Dr. Zimmerer says the article "is so misleading as to require some clarification. From its list of 'Four Star Hospitals' it would appear that Iowa has no hospitals competent to treat cancer patients. This is wholly untrue and is the result of the ridiculous criteria set up for inclusion in the list which omits not only Iowa hospitals but such well known institutions as the Mayo Clinic, the Lahey Clinic, Billings Memorial Hospital and others.

"There are in the state nine tumor clinics approved by the American College of Surgeons," Dr. Zimmerer continues. "Eleven hospitals in the state are approved by the same organization for residencies, of which there are 260, some being two and three year residencies, Eleven hospitals also, not always the same ones, are approved for interne training by the American Medical Association and 92 internships are available though only 59, or 63 per cent, were filled as of September 1, 1953. Unfortunately, no institution offers an organized course for graduate training in surgery, though there is post graduate training in seven other specialties. This is the crux of the matter. We cannot agree that only a teaching hospital has facilities for the diagnosis and treatment of malignancy.

"Iowa has well distributed hospitals with competent, even superior, professional personnel with excellent pathological services and adequate facilities for radiology, radium treatment, radioactive isotopes and every modality found useful in cancer therapy. Yet these are omitted from the 'Four Star List' because they do not offer postgraduate training in surgery.

"It is unfortunate," concludes the commissioner, "that the self-styled science writer can set himself up as a judge of surgical competency and hospital standards. The publisher of such articles should be held accountable for disseminating inaccurate information."

An additional protest against the magazine article was issued by Dr. Norman B. Nelson, dean of the State University of Iowa college of medicine. He stated, "The people of Iowa should be reassured against the implications of this article. There are numerous fine hospitals in Iowa which are doing a fine job of cancer diagnosis and treatment."—NEW HORIZONS, Winter, 1954.

NATIONAL CONVENTION

The thirty-first annual convention of the Woman's Auxiliary to the American Medical Association will be held at the Hotel Fairmont in San Francisco, California, June 21 to 25, 1954. Registration and national committee meetings will start on Sunday, June 20.

A tea honoring Mrs. Leo J. Schaefer, president, and Mrs. George Turner, president-elect, will be held on Monday, June 21. All doctors' wives are cordially invited to attend.

If you have not already done so, you are urged to make hotel reservation immediately. All reservations are handled through the AMA Housing Bureau, 200 Civic Auditorium, San Francisco, California. Be sure to say that you are a member of the Woman's Auxiliary, for if you do, your reservation will receive special consideration. A list of hotels, with rate and a reservation blank, will be found in current issues of the JOURNAL, A.M.A.

LOST

A number of seasoned, well-loved members of the Auxiliary who seem to classify themselves as "old members" (the rest of us do not feel that way about them). These gracious experienced women have been straying away for several years.

Will anyone having any knowledge of these ladies please help them to return to the "fold," as we feel we have lost some valuable assets to our organization.

A large reward of good fellowship and friendship is offered for their return.

COUNTY AUXILIARY ACTIVITIES

Allamakee

At the home of Mrs. Milton Kiesau, of Postville, Iowa, on March 31, 1954, a Woman's Auxiliary to the Allamakee County Medical Society was organized. Greetings were extended by Mrs. Kiesau, organization chairman appointed by the Allamakee Medical Society, and she introduced the

state officers who were guests. The following members and guests signed the guest book: Mesdames R. R. Jeffries, Donald Dohnalek, Alice Rominger, J. W. Myers, Milton Kiesau, J. W. Thornton, F. W. Kiesau, G. W. Tapper, V. G. Kettlecamp, H. H. Wolf, Edward B. Hoeven, L. E. Hegg, C. H. Flynn, E. A. Larsen.

The following officers, in addition to Mrs. Kiesau, were duly installed by Mrs. Charles H. Flynn, of Clarinda, state organization chairman: Vice-president, Mrs. Thornton, of Lansing, and Sec.-Treas., Mrs. Rominger, of Waukon.

Mrs. Edward B. Hoeven, state president, gave a very informative talk on the general work of the auxiliary using as her theme, "Why a County Auxiliary? and What your dues buy."

Mrs. Larsen talked on the future nurses' clubs and the nurse loan fund. All members and guests joined in a round table discussion later and many questions were asked and answered.

Dallas-Guthrie

The Dallas-Guthrie Auxiliary met in Guthrie Center March 18, 1954. The State President, Mrs. Edward B. Hoeven, was present and gave the address. She stressed the value of TODAY'S HEALTH in public relations, and said that the county exhibits at the Annual Meeting should impress the 75 per cent of the doctors in the state who do not realize the importance of the Auxiliary. She urged doctors' wives to use their influence to change the thinking of people in regard to health and medical check-ups. The Educational Fund is a major issue in the profession now and should be adequately supported. The Dallas-Guthrie Auxiliary contributed \$5.00. Delegate and alternate to the Annual Meeting are to be Mrs. E. T. Warren, Stuart, and Mrs. A. G. Felter, Van Meter.

MRS. C. E. PORTER

Grundy

On April 1, 1954, at the home of Mrs. H. V. Kahler a Woman's Auxiliary to the Grundy County Medical Society was organized. Mrs. Edward B. Hoeven, state president of the Woman's Auxiliary to the Iowa State Medical Society and Mrs. Charles H. Flynn, first vice president and organization chairman, were guests. Mrs. Hoeven discussed the activities of the woman's auxiliary and how much benefit an active county auxiliary can be to the state auxiliary. Mrs. Flynn talked about how the county auxiliary can correlate the work of the organization chairman and also discussed future nurses' clubs.

Grundy County was well represented at this meeting and the following officers were duly installed by Mrs. Charles Flynn: President, Mrs. L. E. Frink, of Reinbeck; Vice-president, Mrs. Kahler, and Sec.-Treas., Mrs. G. R. Gould, of Conrad. After the installation of officers, a very lovely tea was served.

GERM-DISEASE MORTALITY DECLINES

The great progress made in recent years in the control of infectious diseases is demonstrated in the annual report of the Institute of Life Insurance on mortality experience among life insurance policyholders. The group of individuals is a somewhat selected one, but the figures are none the less interesting.

The chief infectious diseases, including tuberculosis, pneumonia, influenza, and the communicable diseases of childhood, set a record low rate in 1935, accounting for fewer than 6 per cent of all policyholder deaths. Immediately after the turn of the century, these germ diseases accounted for more than 25 per cent of all deaths and even ten years ago, were responsible for 12 per cent of all deaths.

"Because the germ diseases took such a large toll at the younger ages, this saving of lives added materially to the longevity of policyholders," the Institute said. "What this means in actual lives saved may be seen by applying the death rates of 40 to 50 years ago to last year's policyholder population. Had the death rate from infectious diseases of the early 1900s still applied, there would have been between 300,000 to 350,000 more policyholder deaths."

The over-all death rate among the nation's 90,000,000 life insurance policyholders was 6.4 per 1,000 in 1953, the same figure as the year before. It was only slightly above the all-time low of 6.3 per 1,000, recorded in 1949 and 1950 and compares with 7.5 per 1,000 ten years ago.

During the past year, the ordinary death rate declined slightly, while the industrial death rate held at practically the same level. Among ordinary policyholders, both heart disease and cancer showed a slight reduction in death rate, while both showed a slight increase among industrial policyholders. The latter represent a group having somewhat lower average incomes, since they are people who pay premiums weekly to collectors.

Among both types of policyholders, deaths from tuberculosis showed a further decline to a new low, one-fifth to one-fourth below last year's previous low. In the case of ordinary life insurance policyholders the rate was .042 per 1,000—or less than 7/10 of 1 per cent of all deaths. This represents an 80 per cent decline in just ten years.

Deaths due to pneumonia and influenza showed a slight increase in 1953, due to a mild epidemic at the start of the year; the death rate from these combined causes was still about half that of ten years ago.

Accidental deaths declined, especially those from home and industrial accidents.

Heart disease, including the entire range of diseases associated with the heart and arteries, showed a lower death rate among ordinary policyholders, but a slightly higher rate among industrial policyholders. With the rapid decrease in hazard from infectious diseases in recent years, heart disease has assumed increasing importance,

in 1953 accounting for well over half of all policyholder deaths. To aid in the search for the causes and treatment of this group of diseases, the life insurance companies have set up the Life Insurance Medical Research Fund, to which they have already contributed more than \$6,000,000.

CANCER SOCIETY AWARDS NURSE SCHOLARSHIPS

A group of 50 young women from 41 Iowa counties have been selected from 103 applicants in statewide competition as winners of three-year nurses' scholarships awarded by the Iowa division of the American Cancer Society. No more than 3 are residents of any one county. The awards grant tuition, fees, books and uniforms for three years of nurses' training (but not to exceed \$500), beginning this fall, at any accredited school of nursing in Iowa chosen by the recipients.

Primary considerations in the selections were: rank in the upper third of class scholastically; satisfactory results in pre-nursing tests and acceptance by accredited Iowa nursing school; need of financial assistance; and personal qualities essential to becoming a good nurse as attested by character references. In accepting the scholarships all must agree to finish their training unless prevented by sickness, not to marry while in training, and to practice their profession in Iowa for two years immediately following their graduation.

First in the nation to set up such a program, the Iowa division now has 137 nurse trainees from 67 counties attending 23 nursing schools in Iowa. In addition, 79 nurses granted scholarships in 1949 and 1950 have graduated, and are now practicing their profession in Iowa. Aimed at relieving the critical nursing shortage in Iowa, the scholarships are part of a long range program to expand the Society's service for needy cancer patients.

SPEAKERS' BUREAU SCHEDULES RADIO

WOI—Thursday at 11:15 a.m.

"TIME OUT"

May 6 First Aid
May 13 Getting Along With People
May 20 Restful Moments

"KEEPING YOUR BABY WELL"

May 27 You and Your Baby

WSUI—Tuesday at 11:45 a.m.

"MAIN STREET MEDICINE"

May 4 Medical Research Foundation
May 11 Community Health Survey
May 18 School Health
May 25 Four Year Medical School

Television broadcasts will be resumed in the fall.

COUNTY SOCIETIES

MEETINGS

Black Hawk

At the April 20 meeting of the Black Hawk County Medical Society, Dr. Noble W. Irving, Des Moines radiologist, spoke on cancer.

Calhoun

Ten members of the Calhoun County Medical Society met in Manson on March 4, to hear a talk by Dr. Charles Baker, a Fort Dodge pediatrician, on the subject "The Well Baby."

Dallas-Guthrie

On March 18, Dr. Harold Marguilese, of Council Bluffs, spoke to the Dallas-Guthrie Society on "Clinical and Physiological Considerations in Emphysema."

Des Moines

Dr. Norris J. Heckel, clinical professor of urology at the University of Illinois, addressed the April 13 meeting of the Des Moines County Medical Society at Hotel Burlington on the subject "Diagnosis and Differential Diagnosis of the Genito-Urinary System."

Henry

Dr. K. R. Kingsbury, of Ottumwa, gave the scientific talk at a meeting of the Henry County Medical Society, in Mt. Pleasant, on March 19.

Johnson

Dr. Elmer L. DeGowin, professor of internal medicine at S.U.I., addressed the April 7 meeting of the Johnson County Medical Society on "Treatment of Thyrotoxicosis With Radio-Iodine."

Linn

Dr. Louis E. Moon, associate professor of surgery at the Creighton University Medical School

and a practicing proctologist in Omaha, addressed the Linn County Medical Society on March 11, about "The Diagnosis and Treatment of Anal Rectal Lesions."

Polk

At the March 17 meeting of the Polk County Medical Society, Dr. James A. Clifton, associate professor of medicine, Dr. Frank E. Coburn, associate professor of psychiatry, and Dr. R. T. Tidrick, professor and head of the Department of Surgery, of S.U.I., participated in a panel discussion on acute ulcerative colitis. Dr. Daniel A. Glomset, of Des Moines, was moderator.

Sac

Dr. Dwayne Howard, of Sioux City, was guest speaker at the monthly meeting of the Sac County Medical Society held at the Park Hotel in Sac City on March 11. He spoke on the use of radioactive gold in the treatment of certain forms of prostatic cancer.

Scott

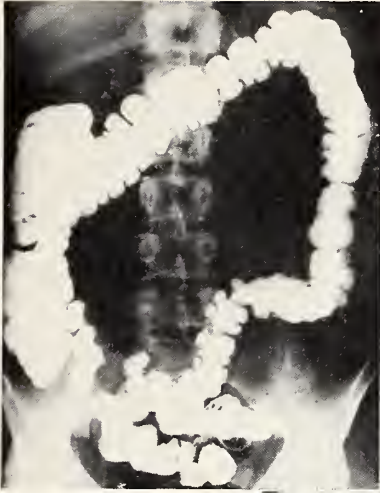
At the Outing Club in Davenport, on April 6, the Scott County Medical Society heard Dr. W. C. Keettel, professor of obstetrics and gynecology at S.U.I., discuss "The Problem of Infertility."

DEATHS

Dr. Francis William Hobart, 49, of Lake City, died suddenly of a heart attack at his home on March 11.

Dr. Charles E. Lovett, 70, who practiced at Lineville until his retirement about a year ago, died of a heart attack on March 15, at Weatherford, Oklahoma, while on his way home from California.

Dr. Jesse Eugene Russ, 69, died in a hospital at Rochester, Minnesota, on April 5. He had practiced in Rake for 41 years.



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The average adult dose is one rounded teaspoonful of Metamucil powder in a glass of cool water, milk or fruit juice, followed by an additional glass of fluid if indicated.

Metamucil is supplied in containers of 4, 8 and 16 ounces. It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. G. D. Searle & Co., Research in the Service of Medicine.

The Month in Washington

These spring days are growing into weeks that really count in Congress. Unless a bill deals with an emergency, it had better be well on its way through committees by now or its chances of enactment will fade rapidly as summer approaches.

For good or evil, a large amount of health legislation is well advanced, and if Congress holds to an average pace, several bills affecting the medical profession are likely to become law in the next month or so. Here is the situation in brief:

Medical Deductions. Legislation to increase the amount deducted from taxable income for medical expenses is a part of the omnibus tax revision bill which cleared the House early and by a wide margin, but ran into some delay on the Senate side. This bill, with the medical deduction liberalization intact, should reach the White House in plenty of time.

Hill-Burton Expansion. A move to make important changes in this bill developed in the Senate Labor and Welfare Committee, after the House had passed its version with some amendments. American Hospital Association proposed that the rather complicated House legislation be scrapped, and instead that the Hill-Burton Act be amended to (a) include rehabilitation centers and nursing homes, and (b) place a high priority on hospitals for the chronically ill. The AHA idea immediately attracted support in and out of the committee. The new approach meant inevitable, but probably not fatal, delays.

Reinsurance. This proposal, once hailed as the keystone of the Eisenhower administration's health program, continued to encounter opposition. At one stage, of all the national associations to testify on reinsurance only American Hospital Association was giving it unqualified support. American Medical Association, the U. S. Chamber of Commerce, and national spokesmen for the insurance industry took about the same position: (1) Reinsurance alone cannot make uninsurable risks insurable. (2) The threat of federal control of medicine is inherent in any program that would bring the federal government in such close contact with medical practice. Dr. David B. Allman, representing the AMA at the House hearings, emphasized that the association would welcome and co-operate in any movement carrying real promise of promoting voluntary health insurance.

Health Grants. This is an administration plan to do away with the present categorical grants for identified projects, such as venereal disease control, and to substitute funds earmarked for three general purposes, (a) to maintain present programs, (b) to initiate new programs or to expand existing ones, and (c) to finance public or private experimental or pilot programs of national or

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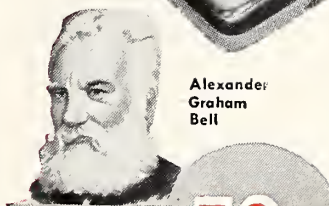
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30-105—Blood Grouping Serum (Set Anti-A and Anti-B), 5 cc. of each.....	Set 4.50
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32-102—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 2 cc.	Each 3.25
32-105—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 5 cc.	Each 7.50

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regional significance. In both committees the question was whether to group the first and second type grants together, with the state health authorities deciding how to divide up the federal money among old and new projects. Funds for the third type grant—experimental—would be completely controlled by the surgeon general. One suggestion is to require approval of the state health officer for any experimental (type three) grant in his state. Another is to eliminate the third type grants altogether, letting the National Institutes of Health handle public health as well as other medical research grants.

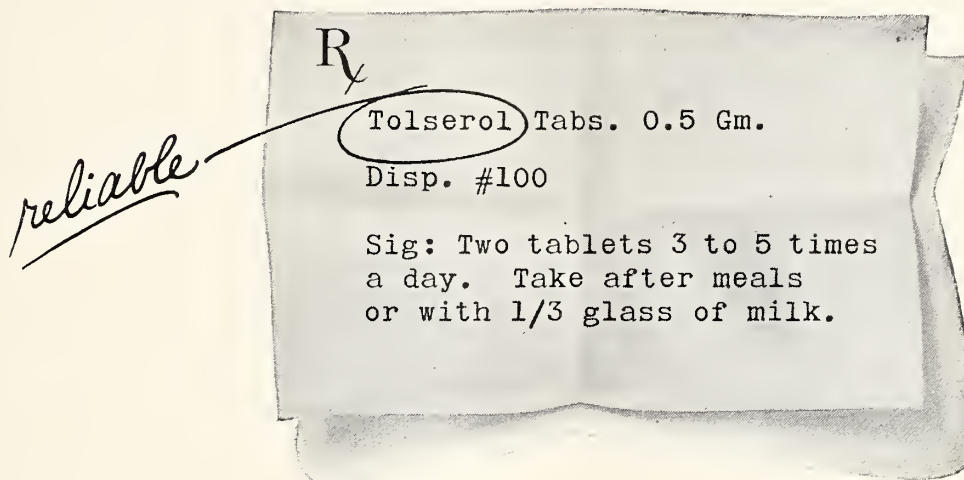
Social Security. American Medical Association, American Dental Association and a number of other national groups are fighting vigorously to prevent compulsory extension of Old Age and Survivors Insurance to physicians, dentists and most other self-employed. Instead, they want the privilege of deferring income tax payments on that part of earnings placed in restricted annuities—the Jenkins-Keogh plan. AMA also feels that there is no need for the bill's provision that pension rights be frozen during periods when the worker has been medically determined to be disabled. A better suggestion, the Association maintains, is to base pension rates on the 10 best working years, thus virtually eliminating the need for the controversial medical examinations. Prospects are good that social security will be extended, either with or without these changes.

Vocational Rehabilitation. Generally, Senate witnesses favor the administration's proposal to expand the federal-state programs, providing U. S. grants aren't cut. However, with no House bill introduced as of this writing, there is some doubt that, even if the Senate clears the measure, the House can find time to deal with it.

Doctor Draft Amendment. This bill, an outgrowth of the Peress case, swept through the Senate without objection. It may be law by the time this is published. It would amend the Doctor Draft act to permit the services to keep on duty as an enlisted man, assigned to professional tasks, anyone called under the Doctor Draft act whose loyalty is questioned. Defense Department has promised to investigate such cases immediately, so that the man can be cleared promptly and offered a commission or discharged. The discharge would state that action was taken on loyalty grounds.

DOCTORS IN AA TO MEET

The fifth annual meeting of doctors in Alcoholics Anonymous is to convene at the Mayflower Hotel, Akron, Ohio, May 14-16, 1954. The group started as a gathering of men from western New York State, but last year's meeting was attended by men from places as distant as Florida and Colorado. For information and reservations, address: Doctors, Mayflower Hotel, Akron, Ohio.

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SQUIBB

PERSONALS

Dr. Chris E. Schrock, a diplomate of the American Board of Internal Medicine, has opened an office for the practice of his specialty in Iowa City. Following graduation from the College of Medicine at S.U.I., two years of service in the Navy, and a residency at his *alma mater*, Dr. Schrock has practiced at Waverly and at Sioux City.

At the end of May, **Dr. John Beebe**, who has practiced in Mt. Pleasant for the past six and a half years, will leave for Seattle, to begin a residency in orthopedics at the University of Washington.

Dr. M. F. Joynt, of Marcus, and **Dr. R. J. Joynt**, of LeMars, left home on March 20 for a trip to Ireland which they planned would last about a month. In England, they planned to visit **Dr. R. J. Joynt, Jr.**, who is interning at a hospital near London.

Dr. Jay S. Benton has joined **Dr. D. F. Miller** in the practice of medicine and surgery at Williamsburg. Dr. Benton received his M.D. degree at Baylor University, in 1949, and has had a year each of residency training in general practice and surgery, in addition to his internship, and a year and a half of Army service.

Dr. John Lesiak, who has practiced at Tripoli during the past year, is to be an associate of **Dr. J. E. Whitmire**, at Sumner. Dr. Whitmire recently completed a new clinic building.

The LeMars Clinic has announced that **Dr. Sherman E. Lindell**, a 1953 graduate of the medical school at Northwestern University now interning at Iowa Methodist Hospital, in Des Moines, will join the Clinic staff sometime in July.

Dr. Richard Mitchell, a diplomate of the American Board of Pediatrics, has entered into practice with **Dr. Carl A. Hansen** at Waterloo. Dr. Mitchell is an alumnus of the College of Medicine at S.U.I. and has done resident work in his specialty at Children's Hospital, Akron, Ohio, and at Iowa City.

Dr. Vernon Weikel has moved from LeMars to

Sioux City, where he will be associated with **Dr. Max Wainwright**, of Morningside.

While on a vacation trip in Florida, **Dr. D. M. Lierle**, head of the otolaryngology department of S.U.I. suffered multiple fractures of the forearm in an automobile accident on April 3. His arm was crushed between his car and a passing truck.

Dr. John J. Gleeson, of Vail, suffered a broken knee in an automobile collision on a gravel road north of Maple River, on April 3.

Dr. Robert Alberti, a pediatrician, has joined the staff of Mercy Hospital, Oskaloosa. He graduated from the College of Medicine at S.U.I. in 1948, and since then has interned in Spokane, Washington, held residencies at Omaha and Detroit, practiced briefly at Traverse City, Michigan, and served a tour of duty in the Air Force.

Dr. Philip G. Couchman and his wife, **Dr. Mary Couchman**, have announced they will start practice in May at Mount Pleasant. Both are graduates of the Medical School at Yale and held one-year residency appointments at Raymond Blank Memorial Hospital, in Des Moines. Dr. Philip Couchman has had training and a year of military experience in psychiatry, and his wife has been director of the county health department at Manhattan, Kansas, for the past six months.

Drs. Marvin Burleson, Frank Larsen, H. H. Kersten, E. F. Beeh, E. M. Kersten, Fred Knowles and Walter Fiesler, all of Fort Dodge, presented the scientific program at the spring meeting of the Iowa Clinical Surgical Society there on April 3. The Society has been organized for about 50 years, and its membership includes about 60 surgeons from all parts of the state.

At the annual joint meeting of the Iowa Tuberculosis and Health Association, the Iowa Heart Association and the Iowa Trudeau Society, held in Des Moines on April 14 and 15, **Dr. Gaylord Anderson**, director of the School of Public Health at the University of Minnesota and past-president of the American Public Health Association, spoke

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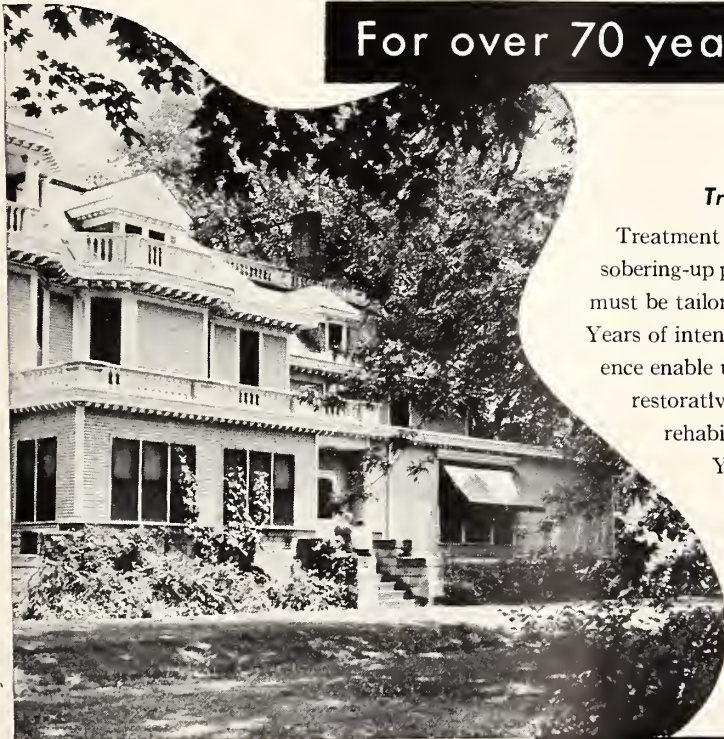
PAUL T. CASH, M.D., Psychiatrist
SIDNEY L. SANDS, M.D., Psychiatrist
HOWARD V. TURNER, M.D., Psychiatrist

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on "Public Health: An Investment, Not an Expenditure," **Dr. William B. Bean**, head of the Department of Internal Medicine at S.U.I. spoke at the dinner session, and four members of the University's Cardiovascular Laboratory participated in a discussion of rheumatic fever.

Dr. Ada Dunner has opened an office for the private practice of psychiatry in Des Moines. Until 1951, she was chief psychiatrist at the Des Moines V.A. Center's mental hygiene clinic, and since then has been on the staff of the Meningen Clinic, in Topeka, Kansas. She is to serve as consultant in psychiatry to the Iowa Children's Home Society and Family Service-Travelers' Aid, in Des Moines.

Dr. E. J. Ridenour has announced his intention of maintaining offices and daily office hours hereafter in both Readlyn and Dunkerton.

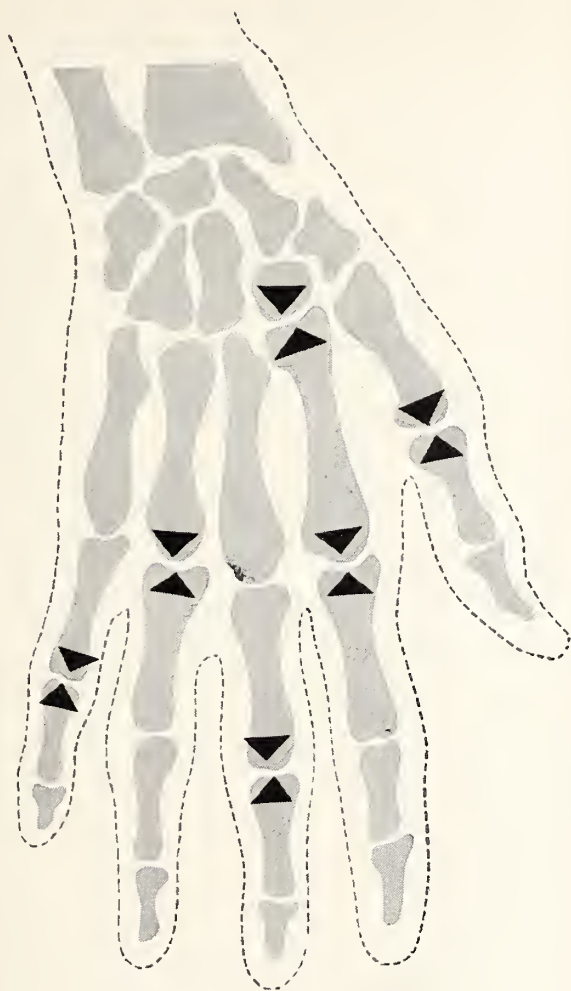
Early in May, **Dr. Arthur Steindler**, distinguished-service professor emeritus at the S.U.I. College of Medicine, will be installed as an honorary fellow of the Royal College of Surgeons, in London. While there, Dr. Steindler will address the orthopedic section of the British Medical Association and the student body of the medical school at Cardiff, Wales. Besides, he intends visiting medical centers on the continent before returning home.

Dr. George H. Powers, of Shenandoah, has been recalled to service with the Navy, effective May 1. He will re-enter service with the rank of lieutenant, senior grade, and expects to be sent to Guam.

Dr. William B. Bean, head of internal medicine, and **Dr. Alson E. Braley**, head of ophthalmology at S.U.I., attended the Dallas Southern Clinical Society's spring conference, in Dallas, Texas, March 15-18.

Dr. F. J. Swift, Jr., of Maquoketa, after 23 years as a radio "ham," has made a gift of his short-wave apparatus to the state of Iowa. Some of the equipment is to be set up in Maquoketa for use in civil defense work. Dr. Swift says he no longer has time to pursue his pastime.

Dr. Robert L. Jackson, S.U.I. professor of pediatrics, will become professor and head of pediatrics at the University of Missouri's new four-year school of medicine on September 1. One of the things that Dr. Jackson anticipates doing is to help set up a two-year residency program in general practice there.



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The Bureau also wishes to find openings for the following specialists desiring a location in Iowa.

- 14 Surgeons
- 7 internists
- 4 obstetricians and gynecologists
- 1 radiologist
- 2 dermatologists
- 4 urologists
- 5 pediatricians
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- 1 ologist

Members who know of locations for any of these young physicians are asked to write the Physician Placement Bureau, Miss Mary L. McCord, 529 36th Street, Des Moines 12.

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8

MORTALITY IN HEART AILMENTS STUDIED

New evidence on the importance of heredity as a factor in heart disease is brought to light by a massive study just completed by the Society of Actuaries. It was found that policyholders who in their application for life insurance reported two or more deaths from heart and allied conditions under age 60 in their immediate family experienced a higher than average mortality.

This study, the most comprehensive of its kind, deals very largely with the mortality among policyholders known to have had physical impairments at the time life insurance was issued to them. Comparison with a similar survey in 1929 shows that in general longevity has improved materially for persons with physical impairments.

Among other significant findings of the current study was additional evidence that certain types of heart murmurs are quite harmless, particularly "inconstant apical murmurs" or "systolic pulmonic murmurs." On the other hand, several types of heart murmurs have just as clearly been shown to be associated with rheumatic heart disease at the younger ages and with arteriosclerotic heart disease at the older ages. While the longevity of persons with these diseases has improved over the years, it remains considerably shorter than that of normal persons. Persons with the more serious heart murmurs usually die of heart disease but, surprisingly among persons with certain types of heart murmurs, some excess mortality from cancer was also found.

The study confirms the findings of previous investigations that a rapid pulse rate, from 90 to 100 per minute, under certain circumstances is associated with somewhat higher than average mortality. This is especially likely to be so when such a rapid pulse is accompanied by a slight degree of overweight, hypertension, or other minor impairments.

Persons who have had a nervous breakdown or who had been diagnosed as psychoneurotic, were found to have experienced only slightly higher than average mortality. Persons with a history of migraine experienced normal death rates.

Favorable mortality was also found among persons with a history of cerebral concussion, indicating that those who have had a concussion without suffering any residual impairment are not subject to any extra mortality. Persons who had had a skull fracture were found to have moderately higher mortality.

The complete study, prepared in consultation with the Association of Life Insurance Medical Directors, will be off the press within a few weeks. Covering the experience under 725,000 policies for the 15-year period 1935-1950, this survey sheds much light on the prognoses for many diseases and impairments, particularly those falling in the broad region between good health and disease. This is an area that can seldom be studied in clinical medicine and never on so large a scale.

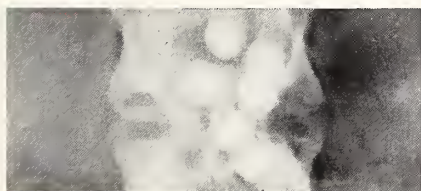
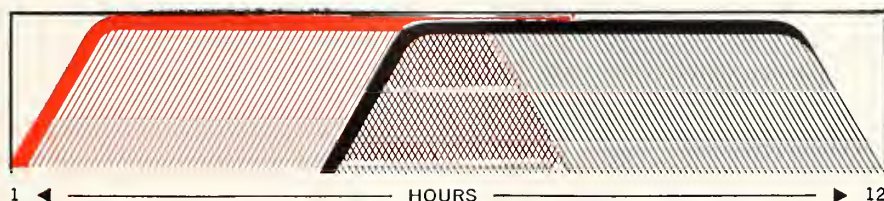
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As of April 10, 1954

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Arnold, K. E., Sioux City (Port Hueneme, Calif.)	Lt. (j.g.), U.S.N.R.
Berg, J. W., Ames	
Bogle, W. C., Marion (Great Lakes, Ill.)	Lt., U.S.N.R.
Braateli, N. T., Des Moines (Rock Island, Ill.)	1st Lt., U.S.A.F.
Brennan, J. E., Des Moines (Camp Pendleton, Calif.)	Lt., U.S.N.R.
Broman, J. A., Maquoketa (Ft. Sill, Okla.)	Capt., A.U.S.
Cline, H. L., Iowa City (Denver, Colorado)	A.U.S.
Couchman, P. G., Des Moines (Ft. Riley, Kansas)	1st Lt., U.S.A.F.
Daut, R. V., Davenport (Westover Field, Massachusetts)	Capt., U.S.A.F.
Davidson, M. C., Emmetsburg (El Paso, Tex.)	Col., A.U.S.
Dooly, J. E., Fort Dodge (Pleasanton, Calif.)	Capt., U.S.A.F.
Duneth, W. R., Kellogg (APO San Francisco, Calif.)	USAF
Eckhardt, R. D., Iowa City (Portsmouth, Virginia)	Lt., U.S.N.R.
Ehmke, Bruce C., Iowa City (Hot Springs, Arkansas)	1st Lt., A.U.S.
Field, C. A., Cresco (DeRidder, Louisiana)	Capt., A.U.S.
Garred, J. L., Whiting (San Francisco, Calif.)	Lt., U.S.N.R.
Garred, W. P., Dow City (San Francisco, Calif.)	Lt. (j.g.), U.S.N.R.
Giles, Francis E., Cresco (Fort Bragg, North Carolina)	A.U.S.
Godbey, M. E., Mt. Pleasant (A.P.O. 862, New York City)	Capt. U.S.A.F.
Gottsch, John E., Shenandoah (MacDill A.F.B., Tampa, Florida)	Capt. U.S.A.F.
Gottsch, Joseph C., Shenandoah (Randolph A.F.B., Texas)	1st Lt., U.S.A.F.
Haskell, J. G., Reinbeck (U.S.A.H., Ft. Riley, Kansas)	
Hickman, D. M., Indianola (Alexandria, Louisiana)	1st Lt., U.S.A.F.
Isham, R. B., Osage	U.S.N.R.
Iwen, G. W., Iowa City	
Jenkins, H. F., Ogden (Randolph A.F.B., Texas)	U.S.A.F.
Johnson, A. A., Jr., Council Bluffs (Fort Worth, Texas)	Capt., U.S.A.F.
Johnson, M. H., Iowa City (APO New York, N. Y.)	Capt., A.U.S.
Johnson, W. A., Emmetsburg (Corona, California)	Lt., U.S.N.R.
Judiesch, K. J., Iowa City (Ft. Sam Houston, Tex.)	1st Lt., A.U.S.
Kenney, B. E., Woodbine (Raleigh, North Carolina)	1st Lt., U.S.A.F.
Koptik, George Jr., Garwin	
Kruse, R. H., Conrad (Pearl Harbor, T. H.)	Lt., U.S.N.R.
Kuehn, W. G., Clarinda (A.P.O. San Francisco, Calif.)	Lt., U.S.N.R.
Kuehnle, G. R., Dubuque (Baton Rouge, La.)	
Kurth, R. J., Waterloo (Minneapolis, Minn.)	Capt., U.S.A.F.
Larson, Erling, Jr., Des Moines (Indianapolis, Indiana)	Lt., U.S.N.R.
Lawler, Matthew P., Des Moines (Corona, California)	U.S.N.
Lee, R. W., Burlington	
Leiter, E. R. K., Des Moines (Bangor, Me.)	Capt., U.S.A.F.
McMahon, A. E., Jr., Des Moines (Omaha, Nebraska)	U.S.N.R.
Martins, J. K., Waterloo (Bayonne, N. J.)	Lt., U.S.N.R.
Maxwell, J. R., Iowa City (Camp Stoneman, California)	1st Lt., A.U.S.
Middleton, W. H., Central City (Bethesda, Maryland)	U.S.N.R.
Montgomery, A. E., Jefferson (Phoenixville, Pa.)	Lt. Col., A.U.S.
Nielsen, G. E., Des Moines (Topeka, Kan.)	1st Lt., U.S.A.F.
Paul, R. E., Des Moines (FPO San Francisco, Calif.)	Lt., U.S.N.R.
Perman, Harvey H., Forest City (Yokasuka, Japan)	U.S.N.
Peterson, L. G., Holstein (Camp Kilmer, N. J.)	A.U.S.
Pfaff, R. A., Dubuque (Camp Pendleton, Calif.)	Lt., U.S.N.R.
Pfeiffer, D. W., McGregor (Ft. Sam Houston, Texas)	A.U.S.
Prendergast, L. J., Iowa City (Oceanside, California)	U.S.N.R.
Province, Wm., Jr., Dubuque (Long Beach, Calif.)	U.S.N.R.
Puntenney, A. W., Boone (Portsmouth, Va.)	Lt., U.S.N.R.
Rhode, M. C., Iowa City (Philadelphia, Pa.)	
Rogers, Edward A., Anamosa (U.S.P.H.S. Hospital, Seattle)	
Saunders, R. J., Colfax (APO San Francisco, Calif.)	1st Lt., U.S.A.F.
Schlichtemeier, E. O., Peterson (FPO San Francisco, Calif.)	Lt., U.S.N.R.
Shaffer, F. J., Iowa City	Col., U.S.A.F.
Shulderberg, Arthur, Des Moines (Gunter AFB, Ala.)	1st Lt., U.S.A.F.
Sinton, D. W., Iowa City (Colorado Springs, Colorado)	A.U.S.
Smith, C. B., Iowa City (Bowling Green, Ky.)	Capt., A.U.S.
Sphonheimer, L. N., Donnellson (Mountain Home AFB, Idaho)	1st Lt., U.S.A.F.
Stivers, T. W., Des Moines (Hutchinson, Kansas)	Lt. (jg) U.S.N.R.
Sugioka, Kenneth, Iowa City (Long Island, N. Y.)	A.U.S.
Theilen, E. O., Iowa City (Washington, D. C.)	Capt. A.U.S.
Thompson, J. W., Ames (Camp Breckinridge, Kentucky)	Capt., A.U.S.
Thornton, F. E., Des Moines (Portsmouth, Va.)	Lt. Cmdr., U.S.N.R.
Troxel, J. F., Cedar Rapids (APO New York, N. Y.)	1st Lt., A.U.S.
Uchiyama, J. K., Des Moines (Wichita Falls, Texas)	1st Lt., U.S.A.F.
von Lackum, L. S., Oelwein (Great Lakes, Ill.)	Lt., U.S.N.R.
Voorhees, P. H., Ottumwa (Jamaica, N. Y.)	U.S.N.R.

(Continued on page xxx)



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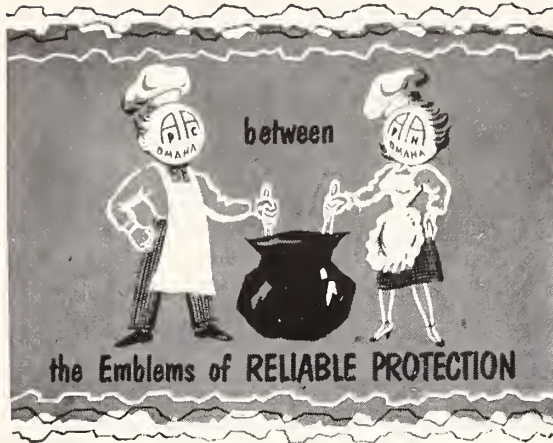
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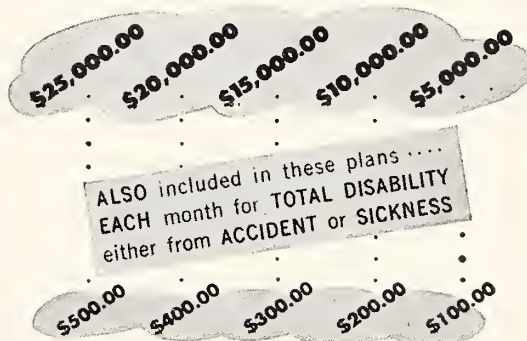
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Walker, J. R., Waterloo
(Bethesda, Maryland) Lt., U.S.N.R.
Walston, J. H., Graettinger
(Lackland A.F.B., Texas) 1st Lt., U.S.A.F.
Westly, J. S., Mason City
(F.P.O., New York City) Lt., U.S.N.R.
*Wilkins, D. S., Iowa City
(APO San Francisco, Calif.) Capt., A.U.S.
Wilson, Robert G., Missouri Valley
(San Antonio, Texas) Flight Surgeon
Witte, H. J., Marathon
(San Francisco, Calif.) Lt. Col., A.U.S.
Young, R. A., Clarion
(Ft. Sam Houston, Tex.) Capt., A.U.S.
Zeilenga, R. H., Orange City
(Madison, Wisc.) 1st Lt., U.S.A.F.
Zoekler, Samuel J., Des Moines
(7071 A.U.S. Hospital, Ft. Belvoir,
Virginia) Capt., A.U.S.

MEDICAL RESERVISTS TO RECEIVE CREDITS FOR ATTENDANCE AT AMA SECTION MEETING

Reserve retirement point credits may be earned by Reserve Medical Corps officers on inactive duty who attend the sessions of the Section on Military Medicine during the annual meeting of the American Medical Association, June 23-25, 1954, in San Francisco, California.

This authorization covers eligible physicians who are Medical Corps officers of the U. S. Army, Navy and Air Force Reserves. Point credits will be awarded eligible Reserve officers on the basis of one for each day of attendance, provided sessions attended total more than two hours.

Scientific presentations for the 3-day assembly of specific interest to civilian practitioners will be discussed by military medical authorities. They include the initial care of the severely wounded, arterial grafts in military surgery, retinal burns produced by atomic flash, a new rapid test for determining antibiotic treatment, and the medical experiences of physicians who were Communist prisoners in North Korea.

Reserve officers will be required to register for each day's session with their respective service and properly authenticated reports of attendance will be forwarded to the cognizant Reserve reporting unit to assure creditation.

ROCKY MOUNTAIN CANCER CONFERENCE

The Eighth Annual Rocky Mountain Cancer Conference will be held in Denver, on July 14-15, at the Shirley-Savoy Hotel. Joint sponsors are the Colorado State Medical Society and the Colorado Division of the American Cancer Society, and there is no registration fee. Eight guest speakers will discuss radiology, dermatology, surgery, urology, pathology, internal medicine and gynecology.

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The Current Treatment of Peptic Ulcer

JOSEPH B. KIRSNER, M.D., PH.D.*

CHICAGO, ILLINOIS

Introduction. Peptic ulcer is the product of an abnormal physiology, characterized by inability of localized areas of the gastroduodenal mucosa to withstand the digestive action of acid gastric juice. In duodenal ulcer, the outputs of hydrochloric acid are two- and three-fold greater than normal; the hypersecretion is continuous, persisting in the absence of the usual stimuli for gastric secretion, that is, between meals and during the night. In gastric ulcer, the output of acid is normal or less than normal; secretion is intermittent rather than continuous; however, tissue resistance is greatly diminished, and the gastric mucosa is vulnerable to the small amounts of acid and pepsin. Chronic peptic ulcer occurs only in persons capable of secreting hydrochloric acid. It develops only in those areas of the gastrointestinal tract exposed to the acid, namely the distal end of the esophagus, the stomach, first portion of the duodenum, the jejunum in a patent gastroenterostomy and Meckel's diverticulum containing acid-secreting gastric tissue. The permanent elimination of hydrochloric acid would solve the problem of peptic ulcer, regardless of psychiatric, neurovascular, hormonal, dietetic or other considerations. Since there is no acceptable method for inducing complete and permanent anacidity in man, the objective of current therapy is protection of the stomach and duodenum from the acid-pepsin attack; theoretically, this might be accomplished by increasing the resistance of the mucosa or by sustained inhibition and neutralization of the hydrochloric acid.

Tissue Resistance. There is no established technique, at present, for directly increasing the resistance of the gastrointestinal mucosa in peptic ulcer. The value of extracts of animal stomach and duodenum and of pregnant mares' urine, hor-

mones, eugenol and chlorophyll for this purpose has not been established. Tissue resistance might be strengthened indirectly by improving the general health of the patient, the avoidance of dietary and medicinal irritants and by the elimination of physical and emotional stresses. The nature of tissue resistance in peptic ulcer is not understood clearly; further study may demonstrate important neurovascular, hormonal and other mechanisms, thereby suggesting more effective approaches to the problem. In the absence of such procedures, current therapy continues to deal largely, though not exclusively, with the neutralization and inhibition of gastric acidity and peptic activity.

Diet. The dietetic management of peptic ulcer is based upon the principle of frequent feedings of soft bland foods, supplying adequate quantities of protein, carbohydrate, calories, vitamins and minerals, and continuously buffering and neutralizing the gastric content. Initially, three or four ounces of an equal mixture of whole milk and cream are administered hourly during the day and evening. Protein and carbohydrate supplements are added if a gain in weight is desired; skimmed milk may be substituted in the obese patient. Additional feedings include soft boiled eggs, toast, butter, cooked cereals, creamed soups, puddings, custards, plain cookies, ice cream and gelatin desserts. In the absence of gastric retention, the feedings are increased rapidly from three to six daily. This schedule, after several weeks, is replaced by a liberal three-meal diet of bland foods, with the smallest meal in the evening. Seasonings, spices, alcoholic and carbonated beverages, fried and excessively hot or cold foods, nuts, corn, pork, sausage, cabbage, turnips and other irritating foods are avoided. One cup of coffee at breakfast and one or two cups of tea are permissible. The diet is continued in principle indefinitely, but is en-

* Department of Medicine, The University of Chicago.

larged gradually, depending upon the course of the individual patient.

Antacids. Many antacids, singly or in combination, are available for neutralizing gastric acidity. None is completely effective, especially in patients with duodenal ulcer, either because of insufficient neutralizing properties, rapid gastric emptying or both. Aluminum hydroxide, aluminum phosphate, magnesium trisilicate, tribasic calcium phosphate and various mixtures of these compounds partially decrease gastric acidity. The most potent antacid, in our experience, is calcium carbonate. Administered in doses of 2.0 or 4.0 grams hourly during the day and evening, this compound is capable of maintaining the pH of the gastric contents between 4.0 and 5.0, thereby eliminating both acid and peptic activity. Constipation, the chief disadvantage of calcium carbonate, may be prevented by the adequate substitution of magnesium carbonate in quantities of one teaspoon as often as necessary. The alkalosis now observed infrequently among patients with peptic ulcer is characterized by hypochloremia, hyponatremia and occasionally hypokalemia; the chemical disturbance is attributable to the low intake of salt and to loss of electrolytes in the vomiting or aspiration of gastric content. Since the soluble alkali sodium bicarbonate may cause an alkalosis characterized by hypernatremia, its use in the treatment of peptic ulcer is not recommended. The administration of calcium carbonate may on rare occasions be complicated by the so-called hypercalcemic syndrome, characterized by moderate alkalosis, increased serum calcium and temporary depression of renal function. This syndrome, when present, is encountered usually in adult males with gastric hypersecretion, pre-existing evidence of renal impairment, and a history of the prolonged ingestion of large amounts of milk and soluble alkali, sodium bicarbonate. The chemical abnormalities and clinical symptoms subside promptly after the discontinuance of milk and alkali and the increased intake of fluids.

Anion exchange resins and sodium carboxymethylcellulose appear not to have striking advantages as antacids. Bismuth, hog's gastric mucin, concentrates of enterogastrone, hormones, detergents, antihistaminics, and compounds inhibiting carbonic anhydrase *in vitro* do not decrease human gastric secretion significantly. Protein hydrolsates neutralize gastric acidity temporarily, but the secondary rise often exceeds original levels. The constant intragastric drip of milk and cream and aluminum hydroxide or phosphate effectively neutralizes hydrochloric acid by temporarily suppressing the cephalic phase of gastric secretion. The intragastric drip may be administered for periods of 12 hours during the night or maintained continuously throughout the 24 hours for seven or ten days. The procedure seldom has been necessary, in our experience.

Antacids usually are administered for long periods of time. The hourly schedule gradually

is replaced by a less rigid program, and subsequently the intake is reduced to several times daily, between meals and at bedtime. Antacids in tablet form are less effective than powders, presumably because of the smaller amounts of neutralizing material and the more limited interaction between tablet and acid. Potent antacid tablets dissolving rapidly and neutralizing the acid gastric content adequately would be very useful in the treatment of peptic ulcer. The neutralizing action of antacids is limited to the period of administration and does not continue after the medication is discontinued. Their effectiveness thus depends upon prolonged use in large amounts, but even under such circumstances, the excessive nocturnal gastric secretion in duodenal ulcer is not controlled easily. Most patients, furthermore, are reluctant to continue the meticulous program indefinitely. These considerations emphasize the importance of a more practical program of ulcer therapy and the need for potent gastric antisecretory compounds, permitting a more liberal dietary and antacid regimen and yet more effective control of the acid gastric secretion.

Gastric Antisecretory Compounds. Tincture of belladonna, in clinically tolerable amounts, does not reduce gastric secretion demonstrably. In occasional patients with duodenal ulcer, atropine sulfate, 0.0005 gm. several times daily, orally or parenterally, temporarily decreases the output of acid, but toxic reactions are common. Synthetic atropine substitutes, including syntropan, novatrine, dibuline, trasentine and bentyll hydrochloride, though diminishing gastrointestinal motility, are not potent inhibitors of gastric secretion. The tertiary and quaternary amines, tetraethylammonium chloride or bromide injected parenterally and hexamethonium salts administered orally, may decrease the output of acid temporarily, but side effects, including dryness of the mouth, blurring of vision, postural hypotension and intestinal atony, may occur.

Current gastric antisecretory compounds represent combinations of the amino alcohol ester structure of synthetic atropine drugs with the quaternary ammonium configuration of TEA or hexamethonium. Among these, Banthine inhibits gastric secretion temporarily when adequate quantities are injected intramuscularly. Banthine orally, in doses of 50 or 100 mg., four times daily, though decreasing gastrointestinal motility, is much less effective in lowering the concentration of free acid; however, the volume of secretion may diminish, and side reactions are frequent. Recurrences of peptic ulcer also have been observed during therapy. Prantal, 300 or 400 mg. by mouth daily, is well tolerated, but its inhibitory effect upon gastric secretion is relatively slight. Other new anticholinergic compounds include Pamine (10 to 30 mg. daily); Pro-Banthine (60 to 120 mg.); Monodral (15 to 30 mg.); Antrenyl (10 to 30 mg.) and Darstine (300 to 400 mg.), as well as Lusyn and Centriline. The gastric antisecretory effects of

these drugs vary greatly. The more potent compounds also tend to induce more side effects although the individual tolerance is exceedingly variable. The role of anticholinergic drugs in ulcer therapy is not yet established clearly. They should be helpful in controlling gastric acidity at least by decreasing the volume of secretion, thus facilitating more effective neutralization with a given dose of antacid and, by reducing gastric motility, permitting a longer period of interaction between alkali and acid. Anticholinergic drugs should not constitute the sole treatment of peptic ulcer; they are utilized most effectively as adjuncts to standard therapy. Thus far, the ideal compound suppressing acid secretion effectively for prolonged periods after oral administration, without uncomfortable reactions and without development of tolerance, has not as yet been synthesized. However, progress towards this ultimate and perhaps unattainable objective seems to have been accomplished, and future studies may yield much more potent and clinically useful preparations. Anticholinergic drugs are contraindicated in the presence of pyloric obstruction, gastric retention, prostatic hypertrophy, cardiospasm and incipient glaucoma.

Gastric Aspiration. Nightly aspiration of the stomach with an Ewald tube is helpful in hospitalized patients with gastric retention since the procedure removes large amounts of acid which otherwise would bathe the ulcer and maintain its chronicity. Gastric aspiration is highly effective in relieving ulcer distress, since it removes the hydrochloric acid directly responsible for the pain. Ulcer distress also is relieved by adequate neutralization of the gastric acidity with antacids; the use of opiates for this purpose is unwise and unnecessary. Repeated aspirations also provide useful information concerning the relative indications for medical and surgical treatment. Thus, a progressive decrease in the volume to three or four ounces suggests inflammatory edema and spasm as the cause of the temporary obstruction, and promises response to medical management. Persistently large aspirates, on the other hand, indicate cicatricial obstruction requiring surgery. Significant quantities of sodium, potassium, chloride and fluids are lost in the large gastric aspirates, resulting in hypochloremic alkalosis, hyponatremia, and hypokalemia. Frequent measurements of the serum electrolytes, the fluid intake and output, and the urinary excretion of chloride, consequently, are necessary in patients aspirated repeatedly.

Gastric Irradiation. As an adjunct to antacid therapy, roentgen irradiation of the stomach has been utilized for the purpose of decreasing or eliminating the hydrochloric acid. Approximately 1,600 roentgen units, total depth dose, are administered in 10 daily applications to the acid-secreting portions of the fundus and body of the stomach over fluoroscopically-outlined anterior and posterior portals. The development of anacidity invariably

results in complete healing of the ulcer with no recurrence for the duration of the achlorhydria. No harmful effects have been observed during a period of 17 years in approximately 1,200 patients, either during or long after the irradiation. The inhibitory effect upon gastric secretion is quite variable. Hydrochloric acid returns in most cases, though not necessarily to original levels; in a few cases the anacidity is permanent. Occasional patients remain completely well indefinitely; more often, symptoms recur but they are less severe than preceding the irradiation and they respond promptly to medical treatment. In those patients in whom gastric secretion is unaffected, the clinical course after treatment is unchanged. Mild roentgen irradiation of the acid-secreting area of the stomach, in our experience, has been a helpful adjunct in the management of chronic recurrent peptic ulcer.

Tobacco. The use of tobacco in patients with peptic ulcer is dealt with most effectively on an individual basis. "Moderate" smoking seems permissible in those individuals receiving pleasure and relaxation from the habit, although interpretation of the term "moderate" varies widely. Excessive smoking is injurious to the gastroduodenal mucosa in peptic ulcer and patients accustomed to smoke a great deal should be instructed to discontinue completely. Efforts merely to cut down the use of tobacco usually fail. Since excessive smoking generally signifies abnormal nervous tension, the important problem would appear to be identification and control of the emotional difficulties.

Gastric Ulcer. The differentiation of benign and malignant gastric ulcer, though difficult, is possible in most cases when all diagnostic methods are utilized, including x-ray, gastroscopy and exfoliative cytology. Thorough medical treatment is justifiable when the total evidence indicates a benign process and when the patient can be re-examined at frequent intervals in the hospital. The "therapeutic test" may be continued for three, six or eight weeks, provided that re-study continues to demonstrate a benign process. The whimsical suggestion that all gastric ulcers not healing completely within two weeks are neoplastic is incorrect, for the complete healing of unequivocally benign lesions may require periods up to several months. Surgery also has been suggested on the assumption that benign ulcers frequently undergo neoplasia. Even though this is a theoretical possibility in unusual instances, its rarity would not justify the recommendation of "operation in 100 per cent of gastric ulcer cases." Actually there is no direct conclusive evidence of the malignant transformation of originally benign gastric ulcers.

Many gastric ulcers heal completely during adequate medical management. Nevertheless, therapy is not as consistently effective as it should be, and recurrences after medical treatment may be anticipated in at least 50 per cent of cases. Partial gastric resection, on the other hand, is successful

in at least 80 and probably in 90 per cent of cases. The low incidence of recurrence after resection for gastric ulcer, in contrast to duodenal ulcer, is attributable to the normal or subnormal and intermittent secretion of acid. The resection of gastric ulcer is indicated under the following conditions: (a) inability to exclude neoplasm; (b) ulcers on the greater curvature of the stomach, though many of these lesions now are known to be benign; (c) perforation; (d) frequent recurrences; (e) recurrent hemorrhage; and (f) delayed gastric emptying, secondary to pyloric stenosis or to contraction of the lesser curvature. Nutritional disturbances, including the so-called "dumping syndrome," difficulty in assimilating fats and inability to gain weight occur subsequently and present difficult therapeutic problems. These distressing postoperative complications appear to be less frequent after gastric resection for gastric ulcer than for duodenal ulcer. They are less common following the Billroth I type of operation than after other types of gastric resection.

Surgical Treatment. Medical therapy is indicated in 85 or 90 per cent of cases. Surgical treatment is necessary in 10 or perhaps 15 per cent of patients with peptic ulcer, but primarily for the complications and rarely for the lesion.

Acute perforation is the most urgent indication for surgery; the procedure of choice is immediate closure. "Conservative" treatment with continuous gastric aspiration, chemotherapy, parenteral fluids and other supporting therapy may seem justifiable in unusual circumstances, but this program should not be the routine management of this complication.

Stenosis is the most common indication for operation in patients with duodenal ulcer. The clinical findings include vomiting, loss of weight, large gastric aspirates, visible gastric peristalsis, and the roentgen demonstration of a large, dilated stomach with narrowing of the channel through the pylorus or duodenum to 3 mm. or less. The surgical procedures most often employed are transabdominal vagotomy and gastroenterostomy or partial gastrectomy, depending upon the preference of the surgeon. Vagotomy and gastroenterostomy have constituted an effective operation for duodenal ulcer, in our experience. Complete vagotomy is difficult to accomplish, yet the gastric hypersecretion decreases significantly in the majority of cases, including those with apparently incomplete vagotomy. The operation combining vagotomy and removal of the gastric antrum is currently undergoing evaluation.

Jejunal ulcer occasionally responds to careful medical management, including roentgen irradiation of the stomach. Surgery usually is preferred, the procedure of choice being transabdominal vagotomy with or without further gastric resection, depending upon individual circumstances. The complication of gastrojejunal fistula occurring during the penetration of a jejunal ulcer, re-

quires the prompt restoration of nutritional, electrolyte and fluid deficiencies, followed by resection of the fistula, reconstruction of the gastroenterostomy and a more adequate gastric resection or vagotomy.

Massive Hemorrhage. The management of massive hemorrhage is primarily medical. Treatment includes complete bed rest, sedation with barbiturates, and frequent measurement of the pulse rate and blood pressure. In the absence of nausea and vomiting, milk and cream and antacids are administered hourly during the day and every two hours during the night. Feedings of bland foods also are permitted. In the presence of vomiting, food and fluids by mouth are withheld temporarily, and fluids are administered parenterally. The antacid program is instituted when the vomiting subsides. The intensive antacid program is continued until the feces are negative for occult blood and the erythrocyte count and hematocrit are stabilized. Treatment subsequently is the same as for uncomplicated peptic ulcer. Transfusions of whole blood, 500 or 600 cc. or more, are indicated when the systolic blood pressure falls to 100, the pulse rate exceeds 100, the erythrocyte count decreases to three million or less, or for continued hemorrhage, regardless of the foregoing criteria. The administration of potent gastric antisecretory drugs at regular intervals during the day and night may facilitate more rapid control of the bleeding by decreasing the output of acid, permitting more effective neutralization by antacids. The intragastric instillation of powdered gelfoam, and thrombin is reportedly helpful also. The management of massive hemorrhage requires the constant cooperation of both internist and surgeon, supervising the care of the patient as a team. The possible need for operation should be considered in any case, but especially in patients 45 years of age and older, in the presence of continued hemorrhage, with red cell counts decreasing despite adequate transfusions. The operation should include ligation of the bleeding vessel if possible, resection of the ulcer or gastric resection. The procedure of vagotomy and gastroenterostomy is not an effective operation for actively bleeding peptic ulcer, and gastroenterostomy alone also is inadequate under such circumstances. Surgical treatment during an interval between episodes of bleeding is justifiable in patients with hemorrhage recurring despite careful medical management in the hospital.

Prompt roentgen and endoscopic examination of the upper digestive tract in patients with gastrointestinal bleeding of unknown origin often is recommended to establish the correct diagnosis early. This approach requires the constant cooperation of clinician, roentgenologist and surgeon, and adequate facilities in the x-ray department as well as in the hospital proper for dealing with renewed or intensified hemorrhage. The program of complete bed rest and antacid therapy, based upon

the statistical frequency of peptic ulcer as the source of gastrointestinal bleeding, may be preferable to the activity of early investigation. Furthermore, in bleeding lesions other than peptic ulcer, such as esophageal varices and erosive gastritis, the immediate cause of the hemorrhage usually is ulceration of superficial blood vessels. Antacid therapy, at least initially, seems helpful in controlling the blood loss under these circumstances also.

Intractability. Operations frequently are advised for so-called "intractable" or "refractory" ulcers. Intractability in peptic ulcer requires careful definition. The failure of an ulcer to heal or its recurrence during haphazard treatment does not represent true intractability, for under proper therapeutic conditions, the ulcer does heal. Many cases designated as refractory probably belong in this group. Emotional disturbances and failure of the patient to maintain adequate therapy are responsible for therapeutic failures in some cases. The underlying problem occasionally may be an unsatisfactory patient-physician relationship. In the truly intractable peptic ulcer, usually effective treatment fails to relieve ulcer distress, promote healing or prevent complications. The immediate cause may be stenosis and delayed gastric emptying or may be penetration of the ulcer into adjacent tissues. The fundamental problem, as in the pathogenesis of the lesion, seems to be inadequate control of acid secretion and decreased tissue resistance.

Recurrences. Peptic ulcer recurs with almost any type of therapy that fails to eliminate hydrochloric acid completely and permanently. The precipitating factors usually are identified as physical fatigue, emotional stress, dietary indiscretions and intercurrent illness. The tendency to recurrences and their severity may be decreased by the following program: (1) complete healing of active ulcer and careful supervision subsequently; (2) continued use of bland diet; (3) practical but efficient antacid therapy; (4) avoidance of gastrointestinal irritants including alcohol, tobacco, corticotropin, cortisone, phenylbutazone and excessive amounts of salicylates; (5) sufficient rest and sleep; (6) prompt treatment of respiratory infec-

tions and other illnesses; (7) resumption of careful dietary and antacid therapy during periods of unavoidable tension or intercurrent illness; and (8) identification and control of the emotional problems. Mild sedation with barbiturates or bromides, vacations, pleasant recreational activity, and the support provided by the interested, friendly physician are important. The objectives of this phase of therapy are the establishment of regular habits and a "life of moderation." Further progress in the treatment of peptic ulcer and the prevention of recurrences will depend upon the development of methods suppressing gastric secretion and improving the tissue defenses more effectively than is possible at the present time.

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Highlights of AMA to Be Televised

Physicians unable to attend the AMA's Annual Session in San Francisco may see highlights of the meeting on their television screens. The third of the 1954 Spring Series of "March of Medicine" telecasts will originate there on Thursday, June 24. Sponsored by Smith, Kline and French Laboratories, in cooperation with the AMA, it will be carried by the National Broadcasting Company's T-V network at 8:00 p.m. (CST), in the time

usually taken by the "Martin Kane" show.

The "March of Medicine" shows continue to receive high "viewer" ratings. An estimated 13,540,000 people saw the March show, which discussed problems of overweight. Its rating of 24.9 puts it ahead of such popular productions as "Suspense" (23.6), "Big Town" (23.5), "Red Skelton Show" (21.1) and Edward R. Murrow's "See It Now" (17.0).

Iowa Maternal Mortality Study for 1952

MADELENE M. DONNELLY, M.D., M.P.H.*

DES MOINES

A STATE-WIDE STUDY of maternal mortality was undertaken in 1952 as a cooperative activity of the Iowa State Medical Society and the Division of Maternal and Child Health of the Iowa State Department of Health. A subcommittee of the Maternal and Child Health committee of the State Medical Society developed and implemented a plan for this study which is divided into the following five parts.

THE PLAN

A. Purpose—The loss of maternal life as a result of pregnancy and childbirth has been so greatly reduced in the past two decades that there is a tendency to consider the present rate as irreducible. Nevertheless, because the fact remains that an appreciable number of the deaths presently occurring could be prevented, many physicians have felt the necessity for studying every maternal death to obtain information for improving the practice of obstetrics. Through the challenge presented by these studies, not only may lives be saved, but obstetric care will be improved.

B. Case Reporting—The first step is to make certain that every death related to pregnancy or childbirth is reported to the Division of Maternal and Child Health. The Division of Vital Statistics has been most helpful in relaying reports of these deaths, but since death certificates are sent to the state department only once a month, most reports are necessarily delayed. All hospitals were sent a letter explaining the program, and confidential report forms were furnished so that each case could be reported without delay. Many cases, in consequence, are now being reported directly by hospital staffs.

C. Case Study—Consultants who are physicians especially trained and interested in obstetrics were selected in each of the state councilor districts to prepare case studies. When the Director of Maternal and Child Health has notified him that there has been a maternal death in his area, the consultant confers with the attending physician and summarizes all details of the case. This report which he sends to the Director of Maternal and Child Health is edited to make certain that all identifiable information has been deleted. At all times, patient, physician, and hospital are protected by complete anonymity.

D. Case Review—A board of five obstetricians convenes every three months to review the prepared case reports and, regarding each of them to establish three facts: (1) whether or not it was a maternal death, (2) whether it was preventable, and (3) in what areas preventive measures could have been applied.

It must be appreciated that the board does not always have enough information to make all of these decisions. Data were particularly scanty in the early part of the study when the venture was new for everyone. As the members of the reviewing board gained more experience in their role in the study, it was necessary for them to change some of their original opinions as to the cause and responsibility for certain of the deaths.

In some cases the board did not agree with the attending physician as to cause of death. To some physicians this disagreement may seem presumptuous, but all decisions, criticisms and corrections were made by the board in a sincere and honest effort to improve obstetrics.

E. Case Summary—A complete summary of each case, with the findings of the reviewing board, is sent to the attending physician. In this report he is invited to inform the board members if he feels they have misinterpreted information or if he would like to have them reconsider some particular phase of the case.

The response of everyone who has had any connection with the study has been excellent. At the end of the first year, all regional consultants met together with the reviewing board and representatives of the State Medical Society and a better understanding was reached regarding the aims and purposes of the study and of the methods for the more efficient gathering of useful information in subsequent investigations.

REPORT OF 1952 CASES

Thirty-two cases were reviewed in the first year. Six deaths were associated with pregnancy, but the cause of death was unrelated either to pregnancy or to childbirth. These cases will be deleted from the statistics used in this report. The remaining 26 cases were true maternal deaths. Since there were 64,987 live births in Iowa in 1952, we have a maternal death rate of 4 per 10,000 live births. Compared to the other states, Iowa has had one of the lowest maternal death rates for many years.

All but four were delivered in hospitals. One of the four was delivered at home, two were in-

* Director, Division of Maternal & Child Health, Iowa State Department of Health. The reviewing board which is referred to consists of Drs. Howard Weiss, J. H. Randall, W. C. Keettel, Jr., Addison Brown and Cecil Seibert. The author wishes gratefully to acknowledge their invaluable help in the preparation of this report.

complete abortions, and the fourth was delivered in a doctor's office suite. Two were not hospitalized at the time of death.

TABLE I
CAUSE OF MATERNAL DEATH

Cause	Number	Per Cent
Hemorrhage	12	46.2
Toxemia	6	23.1
Cardiac disease and embolic accidents	6	23.1
Anesthesia	2	7.9

It will be seen from Table I that hemorrhage was the cause of nearly half of the deaths. It was the opinion of the reviewing board that 17, or 65 per cent, of all deaths had to be classified as preventable. Eleven of the hemorrhage deaths and five of the toxemic deaths were in this category. The responsibility for the prevention of a death was not always charged to the physician, but many times to the patient or her family. In some localities where blood was not readily available, some of the responsibility rested on the hospital.

TABLE II
AGE GROUPING OF MOTHERS

Age Grouping	Maternal Death Rate
-20	0
20-24	2.3
25-29	3.8
30-34	4.3
35-39	11.1
40+	19.9

It will be seen from Table II that the maternal death rates were higher among older mothers. Table III compares the age of the mothers to the various causes of death. With so few cases this variation may not be considered significant, but it is apparent that hemorrhage was a more frequent cause of death in the older age groups, whereas cardiac defects caused the largest mortality among the younger.

TABLE III
AGE OF MOTHERS BY CAUSE OF DEATH

Age Group	Hemorrhage	Toxemia	Cardiac & Embolic	Anesthesia	Total
-20	0	0	0	0	0
20-24	1	1	3	0	5
25-29	4	2	1	0	7
30-34	2	1	0	2	5
35-39	4	0	2	0	6
40 & Over	1	2	0	0	3
	12	6	6	2	26

The maternal death rates as related to parity are represented in Table IV, and in Table V a comparison of parity to the different causes of death is made. In the hemorrhage and cardiac groups more of the mothers had had three or more

children, but most of the toxemic deaths occurred in women having their first or second babies.

TABLE IV
PARITY OF MOTHERS

Para	Maternal Death Rate
0	3.6
1	2.6
2	2.2
3 or more	7.9

Prenatal care was considered inadequate in one-half of the cases. Fifty per cent of the women reported for prenatal care in the first trimester, 34 percent in the second trimester, and the remain-

TABLE V
PARITY OF MOTHERS BY CAUSE OF DEATH

Para	Hemorrhage	Toxemia	Cardiac & Embolic	Anesthesia	Total
0	2	3	1	0	6
1	1	2	2	0	5
2	2	0	0	1	3
3 or more	7	1	3	1	12

ing 16 per cent in the last trimester or at the time of labor. The adequacy of prenatal care was determined partly by the length of time over which it was given, and by other factors such as the frequency of the visits, the cooperation of the patient and her family, and the recognition and treatment of complications by the physician. Conditions which contributed to the death of the mother were noted during the prenatal care in 15 of the cases. In some cases, adequate treatment of these complications was not given. In several instances the patient did not return for prenatal care, despite the fact that some complication had been discovered at an early visit. Table VI pictures the adequacy of prenatal care in the various groups of patients.

TABLE VI
PRENATAL CARE

Cause of Death	No. Cases	Patients Having Adequate Care No.	Per Cent
Hemorrhage	12	7	75.0
Toxemia	6	2	33.3
Cardiac & Embolic	6	4	66.6
Anesthesia	2	0	00.0
	26	13	50.0

Pregnancy was terminated at the expected date of confinement in 12 cases, before term in 9 cases, and from 7 to 14 days beyond the due date in 6 cases. Twenty mothers were delivered of their infants, two aborted and four died undelivered. Postmortem section was undertaken in futile efforts to save two of the undelivered infants. Tables VII, VIII and IX demonstrate the type of delivery,

the fetal salvage and the birth weights of the infants.

TABLE VII
TYPE OF DELIVERY

Maternal Death Due to:	Hemorrhage	Toxemia	Cardiac & Embolic	Anesthesia	Total
Spontaneous	5	2	3		10
Forceps	4	2	2		8
Cesarean Section	1			1	2
Postmortem Section		2			2
Abortion	2				2
No Delivery			1	1	2

Autopsies were done in only 6 (23 per cent) of the cases, but were requested and refused in 2 others.

Conclusions: The review of these 26 deaths revealed valuable information which should be pointed out for further consideration and study by

TABLE VIII
FETAL SALVAGE

Maternal Death Due to:	Hemorrhage	Toxemia	Cardiac & Embolic	Anesthesia	Total
Live Born	8	2	4		14
Stillborn	2	4	1	1	8
No product	2		1	1	4

all physicians doing obstetrics. All conclusions are broad generalizations and are not meant to reflect any lack of professional ability or specific fault upon any one individual. So few maternal deaths occur each year that ordinarily the information gained from them is not available to many physicians. The items which should be carefully studied and evaluated are prenatal care, recognition and treatment of hemorrhage, diagnosis and management of early toxemias, the importance of performing autopsies and the need for competent consultants.

I. PRENATAL CARE

It is notable that a large number of these patients had inadequate prenatal care. Some did not report for prenatal care until late in pregnancy, and others did not return for regular visits. In four of these cases, it seemed that the physician

should have taken a more positive stand in urging the patients to return. The patients showed definite symptoms which should have warned the physician of future trouble.

Importance of good prenatal care must be emphasized to all physicians doing obstetrics. First, each doctor should evaluate the adequacy of his prenatal care with respect to complete history, physical and pelvic examinations, the instructions to the patient and plans for return visits. On each return visit, the physician's attention should always reflect the importance of prenatal care and the necessity for thoroughness.

Next, the physician should explore available services in his community which he can utilize to augment his efforts in prenatal care. The public health or visiting nurse is well trained in teaching expectant parents, either individually or in groups. She can be of great help in interpreting the doctor's instructions to the patient and in helping to make plans for care of the baby and other children in the family. Above all, the public health nurse can be relied upon to encourage and urge that patients return for regular check-up examinations.

The physician can also make good use of his office staff in prenatal care. It is recommended that he read the article "Nurse in an Obstetrician's Office" by Frances Bruehe in *NURSING OUTLOOK*, December, 1953, page 148.

II. HEMORRHAGE

Hemorrhage is our greatest and probably the most preventable cause of maternal death. There are three aspects of blood loss to be considered.

1. *Recognition of hemorrhage:* Unless there is some method established in every delivery room by which blood loss can be estimated, cases will occur in which an important loss of blood may not be recognized. When a patient is anemic, a small blood loss can be serious. There may be no severe loss of blood at any one time, but continuous bleeding or oozing over a long period may be underestimated and may lead to loss of life. The treatment of blood loss is often "too little and too late."

TABLE IX
WEIGHT OF INFANT

			Maternal Death Due to:		
			Hemorrhage	Toxemia	Cardiac & Embolic
					Anesthesia
					Total
Previa	Under 1000 gm	(2lb/3)		1	1
Premature	1001-1500 gm	(2lb/4-3lb/4)			0
	1501-2000 gm	(3lb/5-4lb/6)		2	2
	2001-2500 gm	(4lb/7-5lb/8)			0
Mature	2501-3000 gm	(5lb/9-6lb/9)	2	2	4
	3001-3500 gm	(6lb/10-7lb/11)	2		5
	3501-4000 gm	(7lb/12-8lb/13)	2	1	4
	4001-4500 gm	(8lb/14-9lb/14)	3		5
Post Mature	4501 & Over	(9lb/15 & Over)	1		1
					22

2. *Replacement of blood:* When blood is lost, it must be replaced with blood. Glucose, plasma, plasma expanders and other artificial substitutes can never replace blood and should be used only temporarily until matched blood is available. With a postpartum hemorrhage, blood is needed immediately, and often must be pumped into the vein. To do this it is frequently necessary to cut down on veins and to have more than one transfusion going at the same time.

3. *Search for the cause of hemorrhage:* Whenever an obstetric patient bleeds, the source of bleeding must be determined by inspecting and palpating the birth canal. If the bleeding is coming from the uterus, its cavity must be examined at once. There is always the possibility of retained secundines, as seen in one of these cases, or a tear in the body of the uterus. A few years ago internal examination of the uterus was often delayed because of the danger of sepsis, but today such procedures may be undertaken freely under the protection of antibiotics. The mechanics of certain types of delivery predispose to uterine rupture. A tear of the cervix or vaginal fornix may easily extend into the uterus or broad ligament. If the uterus is ruptured, the patient will have a good chance of survival with immediate blood replacement followed by hysterectomy.

III. RECOGNITION AND TREATMENT OF TOXEMIAS

As was demonstrated in several of these patients, signs of early pre-eclampsia were evident at prenatal visits, and yet no treatment was instituted. Whenever a pregnant woman shows a rise in blood pressure, albumin in the urine, edema, or rapid weight gain, pre-eclampsia should be considered and should be given positive treatment. This means bed rest with supportive treatment, usually best done in a hospital. If the patient responds, her pregnancy should be allowed to continue, but if not, it should be terminated.

As most of these toxemias occur in the last trimester of pregnancy, not too much consideration should be given to size of the infant. If the cervix is "ripe," induction may be done by simple rupture of membranes. If the cervix is rigid and undilated, section will be the delivery of choice. Occasionally a postpartum eclampsia occurs with no forewarning. These cases usually show an increase of blood pressure during labor, which can be detected by blood pressure readings. Unless blood pressure is checked routinely during every labor, postpartum eclampsia may occur without prediction.

IV. AUTOPSIES

Reviewing these deaths makes it definitely evident that more autopsies are needed. In several instances the physician should have assumed

more responsibility in obtaining permission for autopsy. Postmortem examination is often misunderstood by relatives, and they must be approached by the physician in a sincere and honest manner. Hospital staffs can be of great assistance if they themselves are educated to the value and importance of performing an autopsy.

V. CONSULTATIONS

There were few consultations requested, and seldom were they had with trained specialists. Whenever a physician is confronted with a postpartum hemorrhage which cannot be promptly controlled, competent help should be enlisted immediately. With the opening of many small hospitals in rural areas, specialized consultation is becoming more of a problem. This problem should be seriously discussed by the profession, and the isolated physician must realize the need for early consultation and, if necessary, transfer the patient to a well equipped hospital before her situation becomes serious.

In all, the medical profession of Iowa can be proud of its maternal death record, but in spite of the low death rate, physicians must recognize the value of the study of each and every death, even though it may not have been preventable. Such a review serves as a stimulus for further study, and this accumulation of knowledge will be reflected not only in the saving of lives, but in the improvement of the quality of care given to every mother in the state.

CASE NO. 1—TOXEMIA

This 41-year-old nulliparous female did not report to her physician until the sixth month of her pregnancy and made only four prenatal visits. Her mother and sister had both died in childbirth from hypertension and cerebral hemorrhage. On the third visit, her blood pressure had risen from 130/70 to 136/80, and on the fourth visit, which was 2 weeks before expected confinement, it was 150/90. No other untoward symptoms or signs were noted. Weight was not recorded. The patient went into spontaneous labor on her expected day of confinement and came into the hospital with a pressure of 230/120, a trace of albumin, 2 plus sugar and severe edema. There was no evidence of disproportion. Labor pains continued irregularly. Ten hours after admission patient had a convulsion and became comatose. She was delivered of a live 5 lb. 5 oz. infant by mid-forceps after an 18-hour first stage. Magnesium sulphate and sedatives were given. Convulsions continued, and the patient died 16 hours after delivery. No autopsy was performed.

This was a preventable maternal death. The patient herself was at fault for not reporting sooner for prenatal care, but the physician should have been forewarned of trouble because of her age and parity and because of her family history. Positive treatment should have been instituted when the patient came in with a pressure of 150/90. If response to treatment was not prompt, pregnancy should have been terminated by induction of labor or by section, depending on conditions present.

CASE NO. 2—CARDIAC

This patient, 35 years of age, was a para 4, gravida 5. During the fourth pregnancy she had had cardiac failure and was advised to have no more pregnancies. However, she became pregnant, reported for prenatal care in third month of pregnancy and was immediately referred to a heart specialist. His impression was that she had rheumatic heart disease with mitral stenosis and regurgitation with enlargement and dilation. He felt there was no question that the pregnancy would cause serious cardiac embarrassment. In the fifth month of pregnancy she developed acute ventricular failure and died undelivered.

This was a non-preventable death. Discussion brought

out a need for more information about this case. Although today all cardiac conditions do not warrant interruption of a pregnancy, it is usually felt that if a patient ever decompensates during a pregnancy, sterilization is indicated. If that procedure is refused and the patient does become pregnant, extreme measures should be taken, even to point of hospitalization from the earliest part of pregnancy. Apparently the patient and her family did not recognize the seriousness of her condition, or they would have sought medical care earlier in the pregnancy.

CASE NO. 3—NON-MATERNAL

This patient, 46 years of age, died of hypertensive vascular disease. It was stated on the death certificate that the underlying cause of death was a "probable toxemia of pregnancy 12 years ago." The attending physician had not cared for the patient during her previous pregnancies and the birth certificates of these children contained no mention of toxemia. The reviewing board felt that the past pregnancies did not significantly contribute to the death and recommended that the physician amend the death certificate, removing the reference to pregnancy.

CASE NO. 4—EMBOLIC

This nulliparous woman, age 20, was first seen upon admission to hospital in labor. There was a history of right facial paralysis of 3 weeks duration. Her general condition was satisfactory except for a pulse rate of 120. After a first stage of 13 hours, a live 9 lb. 7 oz. infant was delivered by low forceps. Episiotomy was repaired. Thirty minutes later the patient had bleeding requiring massage and ergotrate. No mention was made as to whether or not the bleeding stopped. Two hours later, the patient had pain in her chest, became short of breath, coughed up a little blood and died 4 hours postpartum. No autopsy was obtained. The physician certified the death as due to a pulmonary embolism. No mention was made in her history or on her death certificate of any heart disease, but on the birth certificate "Endocarditis" was entered as a complication of pregnancy.

The reviewing board was not satisfied that the exact cause of death had been determined. More information should have been obtained about the amount of blood lost and about whether or not the loss was completely controlled by the ergotrate. Pulmonary embolism with an endocarditis will have to be considered, but it is felt that hemorrhage played enough of a part in the death to leave it in hemorrhage category. In a normal woman, pulmonary embolism following delivery is very rare. An autopsy would have clarified cause of death. Without autopsy findings it is impossible to say whether the death was preventable or not.

CASE NO. 5—HEMORRHAGE

This patient, 28 years old, para 1, gravida 2, had an uneventful prenatal course adequately supervised. She went into spontaneous labor on the expected date of her confinement and was delivered by forceps of an 8 lb. 14 oz. live baby under pudendal block. Placenta was expressed in 15 minutes, following which bleeding was noted. Bleeding continued, and several injections of ergotrate were given. The patient's color became poor, and she had some unusual muscular twitching which was interpreted as a convulsion. She was given 1,000 cc. glucose, 500 cc. plasma and cardiac stimulants. Death occurred 14 hours after delivery. The attending physician gave the cause of death as pulmonary edema with right heart failure due to cardiac hypertrophy of pregnancy and exhaustion of labor. However, the autopsy revealed 1,000 cc. of clotted blood and two fragments of retained placenta in the uterus.

This was a preventable death due to hemorrhage. With continued bleeding, as evidenced after repetition of ergotrate, the cavity of the uterus should have been explored. Blood replacement must be made with whole blood and not substitutes.

CASE NO. 6—TOXEMIA

This primiparous patient, age 25, presented herself for prenatal care in the second month of her pregnancy. A systolic murmur was heard at the apex of the heart, but there was no cardiac enlargement. Regular visits were made during the rest of the pregnancy. In the seventh month, blood pressure was elevated from 110/70 to 140/100 and remained elevated. By this time she had gained 24 pounds. During the seventh month she had some edema and albumin in her urine. About 6 weeks before term, she had a sudden convulsion and was brought to the hospital in coma. There was no response to treatment and death occurred. A 4 lb. stillborn fetus was delivered by a postmortem section.

This was a preventable maternal death. The patient had a more severe pre-eclampsia than her symptoms indicated. With the weight gain, elevation of blood pressure, edema and albuminuria, more positive treatment should have been instituted.

CASE NO. 7—HEMORRHAGE

This patient, age 39, para 2, gravida 3, attempted to produce an abortion on herself when about 3 months pregnant by inserting a finger into the cervix. She denied the use of any instrument or drug. After spotting for several days, she called a physician to her home. She had some serious emotional problems due to marital troubles. She had a rapid pulse, was pale, but had no temperature or rigidity. The physician did not do a pelvic examination in the home and urged her to go to a hospital, which she refused to do. The physician administered penicillin, calcium gluconate, and coramine. The patient was seen the next day and still refused hospitalization. On the third day she was improved and walked a considerable distance to a carnival. Upon her return home she collapsed, and the doctor was called. He found her in shock, and she expired before an ambulance arrived. No autopsy.

This was a preventable maternal death due to complete lack of cooperation on part of patient and her family. The physician no doubt should have refused to continue care under these circumstances, yet this is often impossible to do. This patient no doubt died from hemorrhage (ruptured ectopic?) and would have been definitely diagnosed had an autopsy been done.

CASE NO. 8—NON-MATERNAL

This 25-year-old patient, para 1, gravida 2, developed bulbar polio in her sixth month of pregnancy. Death was sudden. An attempt was made to salvage the fetus by postmortem section. Autopsy confirmed diagnosis of death from bulbar polio.

CASE NO. 9—TOXEMIA

This patient was 24 years of age, para 1, gravida 2. Her past history was negative. She made three prenatal visits, in her third, fourth and eighth months. Nothing abnormal was found at these examinations. Later in the eighth month, the patient brought her child in for medical care, but refused the physician's request to examine her. Later that same evening, she developed a severe headache and went into labor. She delivered a 7 lb. 12 oz. live baby spontaneously after a 4-hour first stage. One-half hour after delivery, the patient had a severe epigastric pain followed by a series of convulsions. She became comatose. During the next 3 days she secreted daily 100 to 300 cc. urine which had 2+ albumin. She never had an elevation of blood pressure, but had some elevation of temperature. Edema became evident on third day. She was given a number of medications, including intravenous glucose, magnesium sulphate, cortone, diglugin, caffeine, and adrenalin. Consultation was received. The patient expired on third postpartum day of eclampsia.

This was a preventable death. Much of the responsibility may be placed on lack of cooperation on the part of the patient during prenatal period. Postpartum eclampsia usually shows some elevation of blood pressure during labor. Observations during labor would reveal hypertension, and diagnosis could be made early and treatment started before convulsions occur. Oliguria is a difficult problem, and a thorough knowledge of fluid balance is needed if one is to understand its treatment. It is a general principle not to use magnesium sulphate when there is oliguria, although it is only human to try every resource in desperate circumstances.

CASE NO. 10—ANESTHETIC

This patient was a 31-year-old obese Negro, para 2, gravida 3, who had a history of toxemia in a previous pregnancy. She made only three prenatal visits to her physician, one each in the third and ninth months and one after the date of her expected confinement. At this time she weighed 250 lbs., had a blood pressure of 160/90, albuminuria and severe edema. She was immediately hospitalized and consultation was obtained. Five days of medical treatment failed to stabilize blood pressure, although good urinary excretion was obtained. Induction by intravenous pitocin failed. The head was still floating. A section was started under spinal anesthesia. Within 5 to 7 minutes after anesthesia was given the patient went into cardiorespiratory failure. A 7 lb. 12 oz. stillborn fetus was delivered. Efforts to re-establish cardiac activity in the mother were fruitless.

This was a preventable maternal death. It was felt that the physician, recognizing the poor prognosis from history and physical findings, should have taken more responsibility in seeing that she had more prenatal care. Indications for termination of the pregnancy were definite when the treatment failed. Spinal anesthesia is not the anesthetic of choice in a patient with hypertension. It is felt that this is an anesthetic death. This is considered to be a preventable death on basis of choice of anesthetic, lack of prenatal care and negligence on the part of the patient.

CASE NO. 11—NON-MATERNAL

This patient was 20 years old, para 1, gravida 2. Her previous pregnancy was normal, terminating with a spontaneous delivery in 1951. The patient had adequate prenatal care during this pregnancy. In the first trimester she had

an acute appendicitis. Appendectomy was done and her recovery was uneventful. In the 32nd week of gestation, the patient developed an acute fulminating poliоencephalitis and died. An attempt was made to salvage twin infants, 3 lbs. 8 oz. and 3 lbs. 2 oz., by postmortem section. The twins were stillborn. The physician had excellent consultation service. Cause of death, confirmed by autopsy: Bulbar poliomyelitis with mention of pregnancy and pyelitis. This was a non-maternal death.

CASE NO. 12—HEMORRHAGE

This patient, age 44, para 3, gravida 4, had adequate prenatal care started in third month of pregnancy. Labor started spontaneously 10 days after the expected date of her confinement and progressed normally about 7 hours with good fetal heart tones. After head was on perineum, pains became poor and did not strengthen for 30 minutes. Forceps were applied, and a stillborn baby weighing 9 lbs. 3 oz. was delivered with difficulty. Profuse bleeding started immediately. Patient's condition became poor, and plasma, glucose and whole blood were given. A second degree laceration was repaired, but the cervix and the cavity of the uterus were not examined. Consultation was obtained. General supportive measures were continued, but the patient ran a downhill course and died on tenth postpartum day. Autopsy showed a tear in uterus.

This was a preventable maternal death. Following delivery there was uncontrolled bleeding, with rapid deterioration of the patient's condition. Under such a circumstance the uterus and cervix should have been immediately explored. If a defect were found, immediately laparotomy should have been performed. The shock should have been treated by whole blood administered as rapidly as possible. Spontaneous rupture is a rather rare complication.

CASE NO. 13—HEMORRHAGE

This patient, 25 years of age, para 3, gravida 4, of poor economic status, had a family history of hypertension. Her previous pregnancies had been normal. The patient did not report for prenatal care until her fourth month, but had careful supervision thereafter. In the sixth month vulval varices were noted, and some edema was apparent in seventh month. Labor began spontaneously 2 weeks after the date of her expected confinement and was rapid, terminating in 4 hours with precipitous delivery of a 7 lb. 14 oz. live baby. There was a second-degree laceration extending into fornix, which bled 500 cc. immediately. This was repaired and the uterus was packed, but the bleeding continued and the patient went into shock. Consultation was obtained and whole blood started. The birth canal was reinspected and packed. Shock was out of proportion to visible blood loss. Patient received 16 units of whole blood, but died 14 hours after delivery. No autopsy was done.

This was a preventable maternal death. Rupture of the uterus or retention of placental fragments was ruled out by palpation of uterine cavity. Since repair of the laceration did not control bleeding, the reviewing board felt that abdominal exploration was indicated. This would have revealed any extension of the laceration into the broad ligament or any other intra-abdominal condition producing bleeding. Coagulation defects were not ruled out as a factor in the etiology of the hemorrhage.

CASE NO. 14—TOXEMIA

This patient was 43 years old, para 3, gravida 4 and in her fourth month of pregnancy when she first went to physician. At this time her blood pressure was 205/110, weight 185 lbs. No urine specimen was obtainable. She was next seen a month later when her pressure was 214/96, her weight was 186 lbs. and her urine showed red blood cells. Two weeks later she had cramps and bleeding and was admitted to the hospital. Her blood pressure was then 240/130 and her urine showed both red and white blood cells. After 18 hours labor she delivered a 600 gm. stillborn fetus. Placenta showed evidence of complete separation. Immediately after delivery, her blood pressure dropped to 120/80 and her general condition improved until she developed oliguria. Consultation was obtained, and a careful management of electrolyte balance was instituted, but her condition deteriorated and death occurred on the seventh postpartum day. Autopsy revealed a bilateral cortical necrosis of kidney.

This was a non-preventable maternal death, but there should be an explanation as to why the pregnancy was not terminated as soon as the diagnosis was made. With or without the pregnancy, her prognosis for long life was poor. However, there is a possibility that earlier termination of the pregnancy might have been the means of prolonging her life.

CASE NO. 15—NON-MATERNAL

This patient, 35 years old, para 5 had had a radical vulvectomy for a progressive carcinoma of vulva. Six months later she became pregnant. Because of severe pain the patient was hospitalized when about 6 months pregnant. Because the pain could not be relieved by any measure, the baby was delivered by vaginal section. It was then found

that malignancy was spreading rapidly. The patient had an uneventful puerperium, but the malignancy continued to progress and she died 4 months later.

CASE NO. 16—HEMORRHAGE

This primiparous, 38-year-old patient had an uneventful, well-supervised prenatal course. Spontaneous labor started 10 days after the expected date of her confinement. After a 12-hour first stage a rim of the cervix remained, and no progress was being made with hard contractions. The cervix was dilated manually and forceps were applied. The head was rotated anteriorly and a live 6 lb. 6 oz. baby delivered. While the episiotomy was being repaired, the patient lost 500 cc. blood and whole blood transfusion was started. While the patient was being put to bed, profuse bleeding started, and she was returned to the delivery room. The birth canal was inspected, and a tear was found at the vaginal cervical junction. This was repaired, but the cavity of the uterus was not examined. The bleeding continued, shock progressed, and the patient died 4 hours after delivery. She had received 4 units of blood. No autopsy.

This was a preventable maternal death. The trouble began with the intervention in labor. There was no indication for manual dilation of the cervix. In another hour or two, the cervix would have been completely dilated. A deep vaginal tear extending into the cervical region should not have been repaired vaginally until the uterus and cervix had been carefully palpated and the possibility of uterine rupture ruled out. If such an examination showed the patient had a rupture of the uterus, then hysterectomy would have been the treatment of choice.

CASE NO. 17—EMBOLIC

This patient was 38 years of age, para 4, gravida 5. She reported to her physician for prenatal care in the fourth month and had careful supervision throughout the rest of her pregnancy. About the sixth month she had a recurrence of gall-bladder disease, from which she recovered. She went into labor spontaneously about 10 days after her expected confinement. Two and one-half hours later, at 4 a. m., she entered the hospital with the fetal head high, a little dilatation of the cervix, and blood pressure 150/90. Membranes ruptured at 11:15 a. m., with the head of the fetus still high. The patient became irrational. At noon she precipitated a 7 lb. stillborn infant. During labor the patient had a total of 50 mgm demoral, 1/200 gr. scopolamine and 1½ gr. seconal for analgesia, and drop ether for delivery. The placenta did not deliver for 30 minutes, and at this time the patient went into shock. Stimulants, plasma and glucose were given with no response, and the patient died 2½ hours after delivery. The physician and his consultant felt that death was due to pulmonary embolism. No autopsy was obtained.

This was a maternal death and without an autopsy will have to be considered non-preventable. An autopsy was needed to clarify exact cause of death. With a third stage of 30 minutes there is always a possibility that abnormal bleeding was a factor in the cause of death.

CASE NO. 18—HEMORRHAGE

This patient, age 31, para 8, gravida 9, began to bleed in her seventh month of pregnancy. This continued for 3 days, increasing in amount. She then consulted a physician for the first time and was admitted to a hospital. The patient did not admit the passage of a fetus. It was thought that fetal parts were palpated by rectal examination. No vaginal examination was done. The patient was treated with rather small doses of antibiotics. Sedatives and oxygen were given. During the next 48 hours she ran a downhill course. Her temperature was elevated. Vaginal discharge was foul. On the third day patient had sharp pain and became cyanotic. An attempt was made to give intravenous fluid, but the patient expired. Partial autopsy revealed retention of infected placental fragments.

This was a preventable maternal death. The patient and her family were at great fault in not having sought medical care early in pregnancy. After admission to hospital, a sterile vaginal examination should have been done at once and the uterus emptied of any remnants of pregnancy. Supportive treatment should have consisted of large doses of antibiotics and blood replacement.

CASE NO. 19—HEMORRHAGE

This patient was a nulliparous woman of 36 with a contracted plevix. Elective cesarean section was done under spinal anesthesia on the expected date of confinement, and a 7 lb. live baby was delivered. Five and one-half hours after surgery, the patient developed symptoms of shock with a rapid drop in blood pressure, and she became cold and clammy. She was given adrenal cortex, plasma and plasmod. Her blood pressure did not respond, although the quality of her pulse improved. Her red blood cell count at this time was 4 million. By evening, her blood pressure was 120/78, her pulse was fair, her cyanosis gone and she was apparently out of danger. In half an hour, her respiration became rapid and her body cold and clammy, with no blood-

pressure reading obtainable. Stimulants, oxygen and artificial respiration failed, and the patient died 11 hours after surgery. Autopsy was requested and refused. The attending physician felt that death was due to surgical shock following a long period of complete collapse of the circulatory system.

This was a preventable maternal death. The symptoms and signs shown by this patient all pointed to hemorrhage. The normal red cell count could have been accounted for by hemoconcentration. The symptoms were so definitely those of hemorrhage that a careful search should have been made for bleeding. The patient should have had whole blood rather than substitutes. If she did not respond to whole blood, exploration of the abdomen should have been considered. Complete description or evaluation of the contracted pelvis or reasons for not permitting a trial of labor were not furnished.

CASE NO. 20—NON-MATERNAL

This patient, 27 years old, para 4, had delivered at home 5 months before death. At her death the physician certified the primary cause of death as thyrotoxicosis due to a recent pregnancy. Upon review, it was found that this patient had been delivered by another physician. She had had an asymptomatic nodular goitre for several years. She had had a slight amount of bleeding a few days before labor, but labor and delivery were normal. She nursed the baby, cared for her family, did her housework and was apparently well for 5 months. At this time she began to experience fatigue and run a temperature. The physician whom she consulted found a soft, walnut-sized tumor on the side of her thyroid. She had tremors of hands, twitching of facial muscles, temperature 103°F, and rapid pulse and respiration. She was admitted to a hospital for study and soon after admission had a convulsion. Death occurred within 24 hours. The reviewing board felt that inasmuch as the thyroid nodule was of long standing and had apparently not been influenced by the pregnancy, the thyrotoxicosis was the cause of death. It was recommended that the physician amend the death certificate.

CASE NO. 21—EMBOLIC

This patient, age 23, para 1, gravida 2, had a normal well-supervised pregnancy which terminated in the spontaneous delivery of a live 6 lb. 14 oz. baby. Just before delivery, the patient developed acute poliomyelitis with tenderness of the muscles of her lower extremities. On the eleventh postpartum day she was afebrile and was sent to physiotherapy. Immediately afterwards, the patient went into collapse and died. Autopsy revealed extensive varicosities of pelvic veins, particularly the femoral, with evidence of antemortem clotting. There were numerous clots in left lung, particularly in the terminal ramifications of the pulmonary artery.

This was a non-preventable death, and the patient had excellent care. Because of muscle tenderness of the acute polio, any discomfort caused by the thrombosis was masked. However without the polio, there still might have been no symptoms, and thrombosis might have developed even with early ambulation.

CASE NO. 22—EMBOLIC

This patient, age 23, para 3, gravida 4, had severe varicosities of both lower extremities. She did not consult a physician until about the sixth month of her pregnancy. Shortly afterward high and multiple ligations of saphenous veins were done. During the last weeks of pregnancy the patient had such extreme lower-abdominal discomfort that labor was induced with enema and pitocin. She delivered a liveborn 7 lb. 9 oz. child after a labor of one and one-half hours and was in good condition. Because of the varicosities, the patient was ambulated within 2 hours and had no complaints. On the third postpartum day, the patient had sudden syncope and died of a pulmonary embolism. Autopsy was requested but refused.

This was a non-preventable maternal death. The board tried to answer questions posed by the attending physician as follows:

1. Ligation of veins is a matter of comfort and not a prophylaxis against embolism.
2. Bed rest and supportive bandages would have been of no value.
3. Anticoagulants immediately postpartum would have been of no value.
4. A deep thrombosis is very difficult to diagnose.
5. Ligation of femoral vein would have been of no value. By the time it had been recognized it would have extended high enough to have been impossible to ligate.

CASE NO. 23—EMBOLIC

This patient, 31 years of age, para 5, gravida 6, had an uneventful pregnancy, reporting for prenatal care in sixth month. About the expected date of confinement the patient had an acute upper respiratory infection, for which she was hospitalized and treated with antibiotics. She responded to treatment and remained in the hospital until the onset of labor 5 days later. During the 4-hour labor she received a total of 3 grs. seconal and 50 mgms. demoral for analgesia.

The membranes ruptured after this period, and the perineum of patient began to bulge with each pain. Ten to fifteen drops of ether were given for each of several contractions. The patient suddenly became cyanotic, her respirations ceased and emergency treatment failed to revive her. No attempt was made to deliver the patient, as fetal heart tones could not be heard. The cause of death was given as puerperal embolism.

This is a non-preventable maternal death. An embolism would not be likely to occur antepartum. It is more probable that the patient developed pelvic thrombi during period she was in bed recovering from upper respiratory infection. The possibility of amniotic embolism, cardiac arrest and anesthetic accident were all considered. The case was left in the embolic category without autopsy clarification. It is felt that an attempt should have been made to salvage the fetus, for there is a great possibility that under the stress of the situation, heart tones could have been overlooked.

CASE NO. 24—TOXEMIA

This primipara, 33 years old, refused to consult a physician, in spite of her family's protestations until 8 weeks before her expected confinement. At that time her blood pressure was 150/100, and she showed some albumin. She was placed on a salt-free diet and returned twice in the next month to the doctor. On the last visit her pressure was 160/100 and she had 4+ albumin. The attending physician recommended hospitalization and consultation. Through some misunderstanding the patient did not get to hospital for several days, and by that time she was in very critical condition. Medical treatment was tried for 7 days with little improvement. Labor was then induced by rupture of membranes. When dilatation was 4 to 5 cm. the patient showed evidence of collapse. She rallied with intravenous fluids and was delivered by low forceps of a 5 lb. 11 oz. stillborn baby. Following delivery her condition became worse, and she died in about 2 hours.

This was a preventable maternal death. The patient was in critical condition before she saw a physician and then did not cooperate well. After she was finally hospitalized, there should not have been such a delay in the termination of her pregnancy, since she did not respond promptly and well to treatment.

CASE NO. 25—HEMORRHAGE

This 35-year-old patient was para 2, gravida 3. Her previous pregnancies had been normal, and her prenatal care was adequate. She went into spontaneous labor 2 weeks after the date of her expected confinement and was admitted to the hospital. After 16 hours, labor pains became irregular and far apart. Pitocin in glucose was given, her pains increased in strength, but never became tetanic. Dilatation became complete, and the patient delivered a 9 lb. 15 oz. live baby spontaneously. No episiotomy was done because of vaginal varicosities. Immediately after delivery, severe bleeding started. The uterus was examined at once and placenta was removed manually. There were some dark clots attached, and the doctor felt there had been a mild abruption of placenta during labor. There was a deep rent in the left lateral fornix. An attempt was made to suture from below, blood being given in the meantime. Because bleeding continued, a subtotal hysterectomy and left salpingo-oophorectomy were done under local anesthesia without moving patient from the delivery room. Vagina was reinspected and found to be dry, but packing was replaced as a precautionary measure. The patient never regained consciousness after going into shock before surgery, although she stirred and moved at times. One and one-half hours after surgery, the vaginal pack became blood tinged and was removed. There was oozing from the cervix, from the lateral margin of fornix, and from all abrasions and points of contact with instruments. The lateral fornix was sutured, the cervix was completely closed with locked sutures and the vagina was repacked. The patient received 750 cc. plasma, 1000 cc. glucose, 9 units whole blood and continuous oxygen. Death occurred 14 hours after delivery.

This was a preventable maternal death. The attending physician was well aware of the many problems involved and did everything possible to save the patient. The large baby and vaginal varicosities were complications which increased the likelihood of hemorrhage. The attending physician was particularly interested in a discussion of the large amounts of anti-coagulant involved in massive blood replacement. The reviewing board agreed that we need a great deal of study in this aspect of blood transfer. However, the board doubted the wisdom of using pitocin in labor when there is no definite need for hastening delivery, and also felt that with the severity of bleeding and the depth of the laceration, it might have been better to do the hysterectomy at once without temporizing from below.

CASE NO. 26—TOXEMIA

This patient, 26 years old, a para 1, gravida 2, was removed from a train enroute from Ohio to California. On arrival at the hospital she was unconscious and cyanotic, and died shortly. A postmortem section was done to try to salvage the infant, but the 4 lb. 14 oz. child was stillborn. Autopsy established that the death was due to massive

hemorrhage of pons, peduncle and fourth ventricle due to hypertension associated with toxemia of pregnancy. Her husband carried a letter from her physician saying that she had had hypertension in her first pregnancy. He stated that this pregnancy had been normal until 2 weeks before, when she had a blood pressure of 170/120 with albumin and edema. He had advised immediate hospitalization, but the patient refused because she wished to make this trip.

This was a preventable maternal death which is charged to failure of patient to follow her physician's advice.

CASE NO. 27—NON-MATERNAL

This patient, 31 years old, was a para 3. Her youngest child was 9 months old. She had had a toxemia during her first pregnancy, but her second was normal. Five months after the second delivery, the patient had a polycystic kidney removed because of persistent hematuria. Seven months later, she became pregnant. During this pregnancy she developed acute pneumonia, followed by cardiac failure. Because she was taken to another state for medical care and delivery, no records are obtainable. She later returned to her home in poor condition. She continued to have evidence of cardiac failure, developed uremia and died 9 months after delivery. Cause of death was congestive heart failure due to congenital cystic kidney with mention of pregnancy.

CASE NO. 28—HEMORRHAGE

This patient, 29 years old, para 7, gravida 8, was completely uncooperative throughout pregnancy and labor. She did not report to her doctor until the sixth month of her pregnancy, and made only three prenatal visits. The patient went into spontaneous labor on the day of her expected confinement and delayed calling the doctor until it was too late for her to go to the hospital or for him to reach her home. Her mother delivered her of an 8 lb. 8 oz. live baby. The physician checked her soon after delivery. On the fifth postpartum day, while at stool, she started to hemorrhage and a mass of inverted uterus appeared at the vulva. The patient was sent to the hospital, where transfusion was started and vaginal hysterectomy was done 4 hours after the inversion was first noted. She died on the operating table. Death was attributed to shock, with no mention of hemorrhage.

This was a preventable maternal death due largely to negligence on the part of the patient. By the time she was admitted to the hospital, her condition was precarious. When a patient is in shock when first seen, treatment of the shock should be vigorous, consisting of the pumping in of blood and cutting down on veins if necessary. After the patient responds and shock is successfully treated, attempts should be made to replace uterus by vaginal means, and if not successful the abdominal approach for correction of the inversion should be undertaken.

CASE NO. 29—HEMORRHAGE

This patient was 31 years of age, para 3, gravida 4. The third child was delivered by cesarean section after a 24-hour trial labor. During the present pregnancy, she had a definite psychosis and was under psychiatric care. She also had an anemia and was given liver and B₁₂ injections 2 or 3 times a week throughout the prenatal period. She was delivered in rooms connected to the doctor's office. Labor began spontaneously 2 weeks after the date of her expected confinement, and she came in with fair contractions and three fingers dilatation. Her tongue was swollen to such a degree that she was unable to swallow and she complained of pain in her chest. As soon as dilatation was complete, she was delivered under light chloroform by low forceps of a 7 lb. 9 oz. live baby. The placenta delivered with an estimated blood loss of 100-150 cc. The uterus contracted normally. The swelling of her tongue and the pain in her chest continued, she was not cyanotic. About an hour after delivery she went into shock, did not respond to stimulants and died within 50 minutes. The attending physician felt sure there was no rupture of uterus or hemorrhage. There was no tumor of the tongue or evidence of poison. No autopsy was obtained. The cause of death was given as shock.

This was a preventable maternal death. The previous section, the psychosis and the apparently severe anemia were indications for hospitalization at this delivery. All symptoms here pointed to hemorrhage as cause of death. A small loss of blood can be fatal in the face of an anemia. Any patient who has a vaginal delivery following a section should have a manual exploration of the uterus immediately postpartum to rule out any possibility of rupture of the uterine wall.

CASE NO. 30—HEMORRHAGE

This patient, age 24, para 3, gravida 4, had practically no prenatal care. In the sixth month of pregnancy she made one visit to a physician 66 miles from her home, but made no arrangements to return for delivery. She went into labor about 10 days before the date of her expected confinement and drove the 66 miles to this hospital. She delivered a still-born infant weighing 5 lbs. 10 oz. shortly after admission. About 45 minutes after delivery she bled about 500 cc. and

in another 1½ hours started to bleed again. She was given ergotrate, synkamine, antuitrin S, and oxygen. The patient did not respond, and died 3 hours and 20 minutes after delivery. There was no consultation and no autopsy. Cause of death: Cerebral thrombosis after delivery.

This was a preventable maternal death due to blood loss. It is not probable that a woman of this age would have a cerebral thrombosis. The physician was not responsible for the lack of prenatal care or late admission to the hospital. Having recognized hemorrhage and ruled out laceration, the treatment would be sufficient whole-blood replacement. Synkamine and antuitrin S are not indicated in treatment of postpartum hemorrhage.

CASE NO. 31—HEMORRHAGE

This patient, 26 years old, para 3, gravida 4, had a negative obstetric history. She did not report for prenatal care in this pregnancy until the fifth month, at which time she weighed 204 lbs. and had a blood pressure of 158/84. During the remainder of the prenatal period she made 5 visits to her physician. Her weight was reduced 10 pounds, but her blood pressure remained around 150. She had some severe vomiting and some bleeding, and she showed slight albumin and edema. She was admitted to hospital on the date of her expected confinement, and labor was induced by castor oil and quinine. She delivered a 9 lb. 5 oz. baby spontaneously with gas anesthesia, no analgesia. She had a cervical tear high on the right side which was repaired and packed. She started to bleed a few minutes after repair and went into shock and died within 2 hours. The attending physician felt that his repair had been inadequate and was sure there was no tear into uterus.

This was a preventable maternal death, the patient dying of a postpartum hemorrhage which received no treatment. Whole blood should have been given and the uterus explored and examined more thoroughly. The board has difficulty in understanding why a parous woman would receive this severe a laceration during a spontaneous delivery. The prenatal care, delayed on the part of the patient, does not seem to have been adequate, especially with all the untoward symptoms presented.

CASE NO. 32—EMBOLIC

This patient, age 26, para 1, gravida 2, had an uneventful pregnancy, with prenatal care from the third month. Onset of labor was spontaneous at the expected date of her confinement. After 10 hours, she had a transverse arrest at low mid-pelvis for over an hour, and delivery was accomplished by mid-forceps under gas anesthesia. The child was alive and weighed 9 lbs. 2 oz. The postpartum course was uneventful, and patient returned home. Two weeks after delivery the patient developed erythema nodosum with marked edema of legs and was bedfast for 4 weeks. When her condition became worse, she was sent back to hospital, but she was dead on arrival. Death was thought to be due to pulmonary embolism from a thrombophlebitis in addition to the erythema nodosum.

This is a non-preventable maternal death. The board members felt that they could not make a complete analysis without autopsy. It is probable that the patient could have had both erythema nodosum and thrombophlebitis.

SESSION ON LEGAL MEDICINE AT AMA MEETING

Because of the growing interest among physicians in medicolegal problems, a session on those topics has been scheduled for Thursday morning, June 24, in the White Room of the Masonic Temple, at San Francisco.

The following papers will be presented: "Advice to the Medical Witness," by W. I. Gilbert, president of the Los Angeles Bar Association; "Malpractice, an Occupational Hazard," by Dr. Louis J. Regan, Los Angeles; "Medicolegal Problems Related to Sterilization, Artificial Insemination and Abortion," by J. W. Holloway and Edwin J. Holman, of the AMA legal staff; "Prevention of Transfusion Accidents," by Dr. Alexander S. Wiener, Brooklyn; "Legal Aspects of Medical Partnerships," by George E. Hall, of the AMA legal staff; and "Trauma, Stress and Coronary Thrombosis," by Dr. Alan R. Moritz, of the Institute of Pathology at Western Reserve University, Cleveland.

The Lobotomy Program of the Clarinda Mental Health Institute

JOHN D. STEVENS, M.D.*

CLARINDA

AND

WILBUR A. MUEHLIG, M.D.**

OMAHA, NEBRASKA

IN 1935, THE Portuguese psychiatrist Moniz proposed to cut the fronto-thalamic tract as treatment for disturbed psychotics. The operation was designed to eliminate certain influences of the frontal lobe which otherwise tend to stimulate the rage center. The procedure was introduced to this country by W. Freeman in 1936¹ and began to spread widely after the war. It is estimated that more than 20,000 lobotomies have since been performed in the United States.

In the fall of 1951, the Clarinda Mental Health Institute began its lobotomy program with the help of one of the authors as neurosurgeon. It was initiated by a conservative and skeptical staff and, as might be expected, deteriorated patients were the majority of those chosen for the operation. Fiamberti's transorbital method was used. After one or two electroshocks has been administered for anesthesia, an ice pick-like instrument is inserted beneath the upper eyelid, and driven through the roof of the orbit into the anterior part of the frontal lobe. The handle of the instrument is then moved in such a manner as to make medial and lateral incisions in the white matter and also a vertical incision, the so-called deep frontal cut. This procedure is then repeated on the other side. Both sides can be done in about two minutes, and a minimum of sterile technic is required. Postoperative care is simple. The patients are able to walk under supervision half an hour after operation, and most of them are up and around the next day. In 1953 the operation was modified somewhat, eliminating the lateral cut. The original technic resulted in very little personality or intellectual disturbance, but when the lateral incision has been eliminated, such changes are thought to be even less. Two cases of inertia, i.e. marked lack of initiative, resulted in the earlier group in which the lateral cuts were used. No such results were obtained in

the later group. Postoperative convulsions have been seen twice. Their infrequency relegates this complication to a minor objection. None of the epileptics suffered an increase in seizure frequency. By the end of 1953, operations had been performed upon 104 patients, and a short-time survey of the results is now offered. There were 2 fatalities from cerebral hemorrhage; another patient died from coronary thrombosis two years after lobotomy. The national mortality rate of the transorbital method has been estimated at 1.7 per cent. The majority of our patients were chronic schizophrenics (69) with illness of many years' duration. There were 8 epileptics and a few with other diagnoses. The manic depressives have been excluded from the discussion, since in many cases their official diagnoses made many years ago seem unreliable in the light of later symptoms.

Improvement after transorbital lobotomy may appear immediately, but occasionally it continues slowly for some time. Relapses are seen early or late and can be treated with electroshock, usually with better results than before the operation.

As an aid in the evaluation of the results in our series of lobotomies, the nursing supervisors have been consulted as to the patient's postoperative condition.

EPILEPSY

Of 8 epileptics, including 1 traumatic deterioration, 2 showed no improvement, 4 were slightly improved and 2 were moderately improved. Those who have to deal with uncontrolled epileptic behavior problems will be gratified by these results.

SCHIZOPHRENIA

Sixty-nine schizophrenics, the majority with illness up to 20 to 30 years, have formed the bulk of our material. Fifteen showed no improvement, but there was slight improvement in 39, moderate improvement in 10 and marked improvement in 2. These results must be viewed with the hopelessness of chronic schizophrenia in mind. They confirm the general impression that not too much

* Clarinda Mental Health Institute.

** Department of Neurosurgery, Creighton University School of Medicine.

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LOBOTOMY PROGRAM AT CLARINDA MENTAL HEALTH INSTITUTE
104 CASES

	<i>Full time Restraint</i>	<i>Part time Restraint</i>	<i>Total Restraint</i>	<i>Full time Detail</i>	<i>Part time Detail</i>	<i>Minimal ward Activity</i>	<i>Idle in Chair</i>
Male							
Before surgery	11	14	25	3	2	4	23
After surgery	2	0	2	9	0	14	5
Female							
Before surgery	26	31	57	10	4	22	35
After surgery	11	4	15	14	9	15	11
Male & Female							
Before surgery	37	45	82	13	6	26	58
After surgery	13	4	17	23	9	29	16

improvement can be expected with lobotomy in chronic schizophrenia of long duration. These patients usually have to remain in an institution. The benefits are demonstrated, however, in a reduction in the number of electroshock treatments required and in the large scale removal of restraints. Of our 104 patients, 82 had been in restraints before operation—37 full time and 45 part time. Only 17 remained in restraints after lobotomy—13 full time and 4 part time. It is apparent that the management of these patients has become considerably easier from the standpoint of the institution. With this in mind, it has been claimed that lobotomy is of more help to the hospital than to the patients. Such critics overlook the fact that the disturbed patient is reacting to fear and anxiety and that the improvement in his behavior results from the reduction of such emotional strain.

Three patients were able to return to their homes, two of them hebephrenic and one an involutional depressive. Significantly, the duration of illness in these cases had been 3 years or less. These results confirm the impression that the schizophrenic who is made to wait for lobotomy until he deteriorates has lost much of his chance of leaving the hospital.

In the opinion of some, prefrontal lobotomy is more efficient than the transorbital approach. A prefrontal lobotomy is major surgery, it takes at least 45 minutes to do, and the postoperative care is considerably more complicated. The transorbital lobotomy is within the financial limitations of many state hospitals and can be applied to many more patients. Prefrontal lobotomy may benefit a small percentage of patients who are not benefited by the transorbital lobotomy, but the more radical and costly procedure can be done at a later date if the transorbital lobotomy does not seem to have been sufficient. The percentage of complications and the mortality rate in a large series of cases seems to be lower with transorbital lobotomy than with the prefrontal type.

SUMMARY & CONCLUSIONS

Of our 104 patients, 79 have shown some de-

gree of improvement. We therefore conclude that a lobotomy program is worthwhile for state hospitals. It reduces the load on the attendants by decreasing violent behavior, it eases the lot of the patients by reducing tension and anxiety, and it allows the elimination of restraints to a considerable degree, thus, in effect, increasing the supply of institutional labor. It is only symptomatic treatment and is more effective in the earlier stages of mental disease than in the later ones. A small percentage of the patients can be sufficiently improved so that they can return to their homes, and this percentage can probably be increased if patients are operated upon in the earlier stages. Schizophrenic patients are treated with insulin, electroshock, and psychotherapy. When they have received such treatment for a reasonable period of time without improvement or if their improvement has not progressed beyond a certain point, the chances for further recovery are small. The psychiatrist should then consider the suffering and frustrations of chronic illness for the patient and also the financial consequences to the family and community. Thus psychosurgery, it appears, should be utilized as an additional procedure in the effort to improve or restore the mentally ill.

PAMPHLETS TELL MEDICINE'S STORY

To help private practitioners tell Medicine's public-relations story to their patients, the AMA has published a series of four new leaflets suitable for distribution in waiting rooms, to include with statements for professional services, and for giveaway materials in schools and at general meetings.

Four of them are now available: (1) "Quack!"—explains the dangers of going to non-professional healers; (2) "Health Today!"—tells about medicine's progress during the past 20 years; (3) "On Guard!"—outlines the steps AMA takes in evaluating drugs; and (4) "Why Wait?"—describes the best way to select a family doctor.

Members may order quantities either of the entire series or of individual leaflets—without charge—from the Iowa State Medical Society.

Purpuric Anemia (Thrombotic Thrombocytopenic Purpura)

LAWRENCE D. AMICK, M.D.

SAC CITY*

WITH THIS REPORT, the disease concept heretofore designated either as thrombotic thrombocytopenic purpura or as acute febrile pleiochromic anemia with hyaline thrombosis of the terminal arterioles and capillaries first enters the literature of Iowa medicine. Though its causes are unknown and no measures have yet been discovered for stopping or delaying its rapid and invariably fatal course, a review of the first identified case in this state may facilitate its recognition before cases reach the autopsy table, and so constitute a first step toward the discovery of a remedy or a preventative. The disease has been reported elsewhere with increasing frequency, and familiarity breeds diagnosis. In addition, the disease needs to be given a simpler and more useful name.

DIAGNOSTIC TRIAD

Hemolytic anemia, thrombocytopenic purpura, and varied transitory neurologic disturbances compose a clinical triad which allows an ante-mortem diagnosis. The pathologic diagnosis depends not only upon the characteristic anemic and purpuric picture, but also upon the finding of multiple generalized capillary thrombi. Thrombotic lesions in the brain produce neurologic signs. Although neurologic change is a cardinal clinical feature, it deserves special emphasis that this phenomenon ordinarily occurs late in the course of the illness.¹ The symptomatic onset is non-specific, with upper respiratory infection and gastrointestinal symptoms predominating. The disease has been invariably fatal, usually terminating in two to four weeks.

CASE REPORT

History: A 26-year-old single male was admitted as an emergency in a comatose state to Loring Hospital, Sac City, Iowa, on October 8, 1953. He was a high-school athletic coach and had purportedly been in good health until a week earlier, when he had had a cold and chills, whereupon an osteopath treated him with a sulfonamide for a couple of days. He developed nausea and vomiting, which persisted intermittently until his admission. On October 6, he was advised to get other medical assistance and returned to his parental home in Sac City. En route home on that day, he consulted a nearby physician, who reported a normal leukocyte count and a hemoglobin within normal range. An erythrocyte count was deferred, but the pa-

tient was noticed to have a prolonged bleeding time after the finger puncture. He was afebrile. Infectious hepatitis and blood dyscrasia were considered, he was given a hepatic secretagogue, and bed rest was advised.² Some of the emeses were reported bloody and some stools tarry the day before admission. At 2:00 p.m. on October 8, the patient suddenly became unconscious, dyspneic, diaphoretic and hyperkinetic, whereupon he was admitted to the hospital.

Physical Examination: The patient's general pallor was striking. He remained comatose, his breathing was stertorous and his movements were hyperkinetic. The fundi and optic discs were normal; the lungs were clear; and the heart size and sounds were normal, with regular rhythm and a rate of 84. His blood pressure was 115/75; his abdomen was soft and apparently nontender; his liver, kidneys and spleen were impalpable (with no cooperative breathing); and there was an infected hot-water-bottle burn, first degree, across the upper lumbar region of his back. Rectal negative. Babinsky absent. Deep-tendon reflexes hyperactive. No lymphadenopathy. No evident jaundice. There were no petechial, ecchymotic or hemorrhagic spots on the skin.

Laboratory Examination: On admission the erythrocyte count was 2,840,000; hemoglobin 11 grams; and leukocytes 21,800. Differential analysis showed 77 per cent neutrophils, 11 per cent lymphocytes, 7 per cent monocytes, 2 per cent eosinophils, 3 per cent band cells, and 2 rubricytes per 100 leukocytes. The blood sugar was 194 mg. per cent; the blood group was O Rh - ; and the hematocrit 17 per cent. Total serum protein was 6.85 Gm., albumin 3.83 and globulin 2.75. Cephalin cholesterol flocculation was negative. Van den Bergh direct 1.02; total 5.65 mg. per cent. The Coombs and erythrocyte fragility tests were not done. The blood culture was negative. Urinalysis: 1.013 sp. gr., albumin 1-, sugar negative, bilirubin negative, WBC 2/HPF, casts 6 granular / LPF, amorphous crystals 4-/LPF, no sulfa crystals. Spinal fluid: clear, Pandy negative, cell count 28/cu. mm.

The pathologic consultant³ described the initial blood smear as follows: "Normochromic anemia characterized by marked anisocytosis, well developed spheromicrocytosis and moderately pronounced polychromasia. An occasional metarubricyte (normoblast) is seen. The picture is consistent with hemolytic anemia, of either the acute or the familial type. There is no evidence of malaria.

* Temporarily at Rochester, Minnesota.

Thrombocytes are greatly diminished in number. The leukocytes show nothing of significance." In consultation it was advised that the blood smear be repeated to determine whether the thrombocytopenia was genuine or was an artifact resulting from improper preparation of the first smear.

Course: The patient expired 48 hours after admission and had been febrile throughout. A total of 1,500 cc. of transfused blood had elevated his count to about 4,000,000 red cells, but despite the transfusion he had remained comatose. In the absence of a diagnosis, adrenal cortical steroids were not given, for fear of exacerbating an infectious process. The patient's sclerae became slightly jaundiced, and his urine remained dark choluric. Movements of his arms and legs were free and coordinated, although not purposeful, at the onset of the coma, but later showed tremor and spasticity and became convulsive, requiring sedation and narcosis. In the terminal 24 hours, there was lessened activity of the right leg and arm, which at times seemed paralytic and flaccid, with an increased tremor of the left leg and arm, and cervical rigidity. No definite Babinsky was obtained. While receiving oxygen, he became cyanotic and severely dyspneic, with rales and dullness in the lung bases and with occasional Cheyne-Stokes. Blood pressure was 140/60. Convulsions preceded death.

Diagnosis: Autopsy and hematologic specimens which were sent to the consulting pathologist determined the final diagnosis. In his report on the second and last blood smear, he said, "The erythrocytic changes previously described are exaggerated in this smear. There is more polychromasia. There is more anisocytosis. There is more pronounced spheromicrocytosis. These changes are consistent with hemolytic anemia. Neutrophilic leukocytes show moderate left shift and minimal toxic changes. There is a paucity of thrombocytes. Thick smears fail to reveal the presence of malaria parasites. The described changes are consistent with thrombotic thrombocytopenic purpura."³

Autopsy: The pathologist's autopsy report was as follows: "There is a good sized portion of the liver which presents a greenish hue. The lobular markings of the liver parenchyma are accentuated. To a segment of its surface a small portion of unremarkable gall-bladder wall is attached. The spleen, which weighs 516 grams, presents a smooth convex surface, is rather firm and appears congested. The kidney weighs 217 grams; its capsule strips with ease, revealing a smooth, gray-brown colored surface, mottled faintly with tiny areas of pale red. The cortico-medullary markings are fairly well defined. The pelvis shows no changes. A separately received portion of a kidney is similar in appearance to the whole kidney just described. A portion of a pancreas which measures 4 by 3 by 2.8 cm. shows nothing unusual. There are two pieces of lung, each measuring about 6 cm. in maximum dimension. The pleural surfaces pre-

sent a few areas of deep reddish discoloration; these rather well defined areas are quite small. The pulmonary substance seems rather firm and congested. A segment of right ventricular wall includes part of the tricuspid valve, chorda tendineae and contiguous papillary muscle. Much postmortem blood clot is enmeshed in the interstices. The endocardium shows areas of light-reddish discoloration. The epicardium is pale and smooth. The myocardium is extensively mottled with red. A large portion of the brain stem, including much of the cerebellum and a piece of cerebral tissue, also have been received. These tissues display no grossly recognizable changes when viewed externally, but sectioning demonstrates areas of reddish discoloration of the substance of the cerebellum at one point. Other very small areas of petechial hemorrhage are seen in the pons and elsewhere through the brain stem. There are two pieces of bone, one of which obviously represents a segment of the sternum. Also, there is a small accessory spleen about 9 mm. in diameter.

Microscopy: The clinical and pathologic findings in this case are consistent with a rare syndrome described by Altschule and others⁴ as thrombotic thrombocytopenic purpura. The condition is marked by rapidly progressive hemolytic anemia, slight icterus, reticulocytosis, leukocytosis, profound thrombocytopenia, prolonged bleeding time, melena, hematemesis, hematuria, and finally stupor, delirium and death within two weeks to two months. The characteristic diagnostic triad of the syndrome consists of thrombocytopenic purpura, hemolytic anemia and transitory focal neurologic signs. The outstanding pathologic features of the disease are a wide dissemination of thrombotic lesions with associated hemorrhages throughout the body, the thrombi being found in capillaries for the most part.

"The heart is outstandingly involved in this case. The peculiar gross appearance of the myocardium is due to interstitial edema with widespread focal hemorrhage complicating the presence of finely granular purplish thrombi, presumably platelet thrombi, lodged in the majority of the capillaries.

"Similar lesions are found in the pancreas, kidney, liver and brain.

"The lungs are the sites of severe passive congestion. The alveoli contain much serum and numerous pigment-laden macrophages. They also contain moderate numbers of erythrocytes and neutrophilic leukocytes.

"The bone marrow appears moderately hyperplastic. It contains large numbers of megakaryocytes, despite the extreme thrombocytopenia encountered in this case.

"Complicating the capillary occlusive process, in the pancreas one finds mild to moderate degrees of acute interstitial inflammation involving numerous small areas. It is also noted here that some of the vessels occluded by thrombi are rather broad and undulating in contour.

"In the kidneys, scattered glomeruli are occluded by platelet thrombi.

"The liver and the spleen are the sites of well-developed passive congestion.

"*Opinion:* Thrombotic thrombocytopenic purpura, characterized by extreme capillary thrombosis of the myocardium, with associated:

Passive congestion of the lungs, liver and spleen
Acute interstitial pancreatitis
Accessory spleen."³

DISCUSSION

The literature has established thrombocytopenic purpura associated with hemolytic anemia and disseminated arteriolar occlusion as a new and distinct clinical and pathologic entity.¹ While the above case satisfied these criteria, the attending physician thought first of internal bleeding from a peptic ulcer as a possible cause of the drastic normochromic anemia that presented. A ruptured mycotic or cerebral aneurism was conjectured. Malignant falciparum malaria and blood dyscrasia came to be considered in an attempt to correlate the varied phenomena.

As regards nomenclature, the diagnosis of thrombotic thrombocytopenic purpura did little justice to the striking sign of anemic pallor in the absence of superficial cutaneous petechiae in this patient. The term, furthermore, is awkward and challenges the acuity of speech and hearing. And also, it challenges credulity by emphasizing the paradox of thrombotic lesions concomitant with thrombocytopenia. The term, in consequence, seems a hematologist's delight and a practitioner's curse.

Moschcowitz, credited with establishing the pathologic concept of the disease,¹ first described it as an acute febrile pleiochromic anemia.⁵ In his case report he stated that a few petechiae were present on the arm and that no platelet count was made. While it may be said that Moschcowitz omitted the purpura, it is equally true that the name of the disease today omits the anemia with which Moschcowitz began and with which the clinician still begins and is so strongly impressed. The anemia under consideration "is independent of the bleeding and often antedates the bleeding."¹

Purpuric Anemia is a term that could suffice and offer a meaningful brevity. It declares abruptly the diagnostic findings the clinician is apt to become aware of at the outset. It tends to correlate the varied phenomena and beseeches the diagnosis by emphasizing two out of the three acknowledged diagnostic components of the syndrome. It implies a primary anemia and a primary purpura, and, so used as the diagnostic title, need not be confused with an anemia secondary to a purpura. "Thrombotic" can be sacrificed for brevity, for while it may pathogenetically signify the bizarre neurologic changes, these usually come late or terminally in the illness.¹ The neuropathologic aspect will be easily associated when the term is compared with "pernicious anemia," which

also betokens neurologic complications, even though not prefixed with "combined sclerotic."

The abolition of the term "thrombotic thrombocytopenic purpura" and the substitution of the term "purpuric anemia" is proposed to dispel the perplexity of the clinician who first sees the case. Earlier accurate diagnosis will be likely to reveal more cases for study and so facilitate their referral to centers where in vivo investigation can be initiated. The trial use of cortisone and ACTH in purpuric anemia may be encouraged in view of the component or acquired spherocytosis which may be benefitted by an alteration of immune reactions.^{6,7} Measures, even terminological, conducive to wider study of such cases should add hope, since even pernicious anemia was once considered practically incurable.

SUMMARY

The first reported case in Iowa of thrombocytopenic purpura with hemolytic anemia and associated multiple capillary thrombi and neurologic changes is presented. It is brought out that this syndrome represents a recently established clinical entity which is being increasingly recognized and is at present regarded as uniformly fatal. Detailed pathologic findings are included.

The diagnosis of the new syndrome is discussed.

It is recommended that we abolish the cumbersome term "thrombotic thrombocytopenic purpura" and adopt instead the simpler and clinically more useful term "purpuric anemia." The reasons that justify this change in nomenclature are given.

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IOWA-NEBRASKA MEDICAL ASSEMBLY

The Iowa-Nebraska Medical Assembly held a one-day gynecologic symposium at the Hotel Chieftain, in Council Bluffs, on May 17. The speakers were John McKelvey, M.D., head of the Department of Obstetrics and Gynecology at the University of Minnesota; Russell R. deAlvarez, professor of obstetrics and gynecology at the University of Washington, Seattle; and C. Frederic Fluhmann, professor of obstetrics and gynecology at Stanford University. Dr. Donald V. Hirst, of Council Bluffs, was program chairman.

Dormison—A Safe Drug

W. M. HOLLANDER, M.D.

DAVENPORT

THE FOLLOWING CASE is reported as a demonstration of the wide safety margin possessed by Dormison. The patient, a 23-year-old nurse, had been subject to recurrent attacks of depression over a period of two years. On one previous occasion, when she was seriously depressed, she had attempted suicide by ingesting a large amount of a barbiturate. Following that attempt, she had been hospitalized, and it took her about five days to overcome the toxic effect of the drug. She then received a course of electroshock treatments and was able to return to work two weeks later.

At 11:30 p.m. on January 19, 1954, when she was again depressed and unable to sleep, she took 18 capsules of Dormison, 250 milligrams each. In spite of that amount, she was unable to go to sleep, being restless and greatly worried over a love affair. Therefore, only an hour after the first dose, she swallowed an additional 33 capsules of the drug, making a total of 51 capsules, 250 milligrams each. She then fell asleep quickly and slept until 9:00 a.m., the following morning, when her alarm clock wakened her. She got up immediately, but felt rather groggy and somewhat dizzy. She felt sick at her stomach, but did not vomit. She stated, "I felt as if I were having a terrible hangover." She apparently had a disturbance of coordination, for she kept bumping into the furniture in her room. Her head felt heavy, and it was difficult for her to hold it up. She also had a headache.

The patient was living alone, and, deciding to call a physician, she went next door to phone. She then called a taxicab and went to the hospital by herself, where she arrived at about 11:45 a.m. Upon arrival there, she walked with a staggering gait and had other signs of a mild ataxia. Her respiratory rate at that time was normal. Her pulse rate was slightly increased, to 88, and the quality was somewhat thready. Her blood pressure was normal, 118/70. Her weight, 215 pounds, it should be stated, was somewhat too great for her height of 5 feet 8 inches. Mentally, she was definitely euphoric and somewhat confused. Her psychomotor activity was somewhat increased, but her urine analysis and blood count were within normal limits. During the next 24 hours, she was given 7½ grains of caffeine sodium benzoate on two different occasions and she drank a cup of strong, black coffee every three hours. The patient had a hard time sleeping the next three nights, and her slight confusion and euphoria persisted for about four days. The moderate ataxia persisted about four days, too. After five days she had returned to normal in every respect, physio-

logically as well as psychiatrically. Even the depression that had persisted after her previous attempt at suicide completely disappeared after her overdose of Dormison. She was seen in the office about a week after the Dormison episode and seemed to be perfectly all right. It should be borne in mind that a smaller patient might not have recovered so promptly as this 215-pound girl did after taking as much as 12.75 grams of Dormison.

Summary: The patient took 51 capsules of Dormison, 250 milligrams each, within one hour. Eight and a half hours later, her alarm clock awakened her. A comparable dose of any barbiturate would have been fatal, even in a patient of her size, 215 pounds. She proceeded to the hospital on her own initiative, where for four days she was ataxic, confused and slightly euphoric. But with the help of small amounts of caffeine, she recovered completely in four days. There were no undue residuals of this suicidal attempt with Dormison.

ARKANSAS STUDIES RURAL HEALTH NEEDS

Mr. Winthrop Rockefeller has pledged half a million dollars to the financing of an Arkansas Medical Society and Arkansas Academy of General Practice project that will attempt to discover what medical facilities are needed by rural communities now without doctors, and whether or not they can pay for what they need.

The experiment is to consist of two parts. One part will be the establishment and operation of a pilot clinic staffed by a doctor, a nurse or a receptionist, and perhaps a technician. There will be no beds, and the only operations performed there will be emergency ones. Fees will be charged for the doctor's services and for laboratory procedures; indeed, Mr. Rockefeller made it clear that, although he would finance the start of the clinic, he expected it to be self-supporting after three or five years.

The other part of the project will be a research unit which, from observation of the clinic, will seek answers to questions that have puzzled the medical profession for years. They include: (1) Can such a community or area support a medical unit? (2) If it cannot support one on a fee basis, could it support one on a pre-payment basis? (3) If the area needs and can support medical care, why hasn't a doctor located there? and (4) What level of medical service can be provided by the "minimum type" clinic plan?

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THE 1954 ANNUAL SESSION

The 1954 annual session is now a matter of history, but work on the many problems considered by the House of Delegates continues. This possibly was the last meeting to be held in the Hotel Fort Des Moines, if work on the new Memorial Auditorium proceeds according to schedule, and if the Committee on Arrangements decides to utilize its facilities. Fifty-one firms participated in the meeting, and at least ten more were turned away because of lack of space. Registration figures totalled 1,307, broken down as follows: members—858; guests—95; exhibitors—145; and Woman's Auxiliary—209.

The Hotel Fort Des Moines, under new management this year, cooperated in every way to make the meeting run smoothly. Our thanks are due to Mr. Whalen, manager, to Mr. Gill, catering manager, and to their able assistants for the excellent manner in which they took care of our needs. The Freeman Decorating Company and Iowa Sound Service assisted by providing background for our exhibits, and amplification and projection for our meetings. It was a real pleasure to have Mrs. Sadie Thomas of Chicago return as reporter. Mrs. Thomas was with us for many years until she changed her association in 1950. We are glad that she is now back in the field of reporting and hope she will be with us for a long time to come.

Under the able guidance of Dr. Herman J. Smith, Speaker, the House of Delegates considered a tremendous amount of business, much of it controversial or, to say the least, thought-

provoking. The reference committees appointed by Dr. Smith, consisting of able, unprejudiced physicians, demonstrated their value by their careful hearing and sifting of all evidence presented, and their logical and judicious recommendations. Because of the work they did in hearing evidence and debating issues, it was possible to expedite the work of the House greatly.

Scientific speakers were of very high caliber. Attendance at all of the scientific sessions was large, a tribute to the program being presented. Most of the talks will be published in the JOURNAL during the coming year.

CANADA REPORTS "D-P" DOCTOR PROBLEM

The JOURNAL's March editorial on the problem posed by the foreign physician, reprinted in the FEDERATION BULLETIN of the State Medical Boards of the United States, has elicited a reply from the Registrar of the Medical Council of Canada, Dr. J. Fenton Argue, in which he reports difficulties similar to those that confront us.

Dr. Argue says that all foreign physicians seeking licenses in his country are required to appear before one of the provincial medical boards, where they are interviewed and their documents are evaluated. In Ontario, the University of Toronto has agreed to give them an examination in basic science and English, and they are also required to take a one-year rotating internship.

Yet even with all of this preparatory screening, he says, the frequency of failure is alarming. He feels that in part it is due to language difficulties, but, from his 25 years of experience as Registrar, he has become convinced that it also reflects shortcomings in the candidates' medical knowledge.

Figures from the minutes and proceedings of the forty-first annual session of the Medical Council of Canada, which he sent us with his letter, illustrate his remarks about the number of failures. The accompanying tabulation, compiled from those

MEDICAL COUNCIL OF CANADA EXAMINATION STATISTICS

	Candidates			Referred			Rejected		
	Canadian	U. S.	Other Non-Canad.	Canadian	U. S.	Other Non-Canad.	Canadian	U. S.	Other Non-Canad.
October, 1952	30	8	120	6	1	18	0	0	9
April, 1953	216	10	78	9	4	17	0	0	7
May 5, 1953	60	0	5	1	0	1	0	0	0
May 21, 1953	325	12	110	4	4	29	0	1	12
June 4, 1953 (in French)	92	0	5	17	0	2	0	0	0
	723	30	318	37	9	67	0	1	28

statistics, shows that 48 per cent of the candidates examined came from medical schools outside of Canada, and that whereas only 5 per cent of the

Canadians failed to qualify for their licenses, 30 per cent of the others were referred (for failure in one or two subjects) or failed in three or more subjects and so were rejected.

Personal curiosity impelled us to a further breakdown of the figures so as to compare the performances of graduates of schools that were under totalitarian regimes until 1945 or have been behind the Iron Curtain since, with those that are in territory belonging to our Allies. England, Ireland, Scotland, Denmark, Belgium, Holland, Switzerland and China supplied 43 candidates. Thirty-eight of these passed the examination, and the other five were referred. There were no failures.

There were 64 candidates from Germany, Italy, Roumania, Poland, Austria, Iran, Yugoslavia, Hungary, Lithuania, Russia, Czechoslovakia, Estonia and Bulgaria. Twenty-two of these passed, 12 failed in one or two subjects and so were referred, and 30 failed in three or more subjects and were rejected.

Possibly these figures tell the story of inadequate medical training and language handicap. It seems startling that after preliminary evaluation and a one year's internship, so large a percentage should still be unable to qualify for practice.

In justice to everyone concerned, it would seem that some screening process should be set up to evaluate candidates more successfully. Serving an internship and then failing an examination works a handicap upon the foreign graduate. But it also works a hardship upon the hospital to give a berth to such a graduate, when it could just as easily train an intern who would be able to pass. And last, but not least, it works a hardship upon the public in general, for there is a need for physicians and it is almost tragic to let an unqualified person usurp a place in the training program and thereby eliminate a physician who could go out and provide medical service to a community.

PRE-MARITAL PHYSICAL CONSTITUTES REAL OPPORTUNITY

Under Iowa law (596.1) physicians certifying to the freedom from infectious syphilis of the parties to proposed marriages must have made *thorough physical examinations*, as well as standard microscopical and serological tests of the individuals. Blood tests are not enough to satisfy the law, and, as Dr. R. G. Carney, of S.U.I., has pointed out (*A HANDBOOK OF RESOURCES AVAILABLE TO PHYSICIANS*, p. 121ff.), both false-negative and false-positive results occur. If, through his failure to make the required examination or through an inadequacy in his laboratory procedures, a physician permits an infected person to marry, he is legally responsible for the subsequent infection of the marital partner and may find himself the defendant in a damage suit.

But the reasons why every doctor should take the pre-marital physical seriously aren't confined to legal ones. It constitutes a real opportunity for the physician. Arthur C. Curtis, M.D., writing in the April, 1954, issue of *THE JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY*, calls attention to the fact that young couples who seek a physician's approval of their right to marry give him a chance to establish a relationship with them that can last the rest of their lives.

Because the success of their marriage may depend upon the physician's findings and upon his advice, he should check all organs carefully for chronic diseases, for communicable diseases and for congenital abnormalities. In addition, by spending a bit of extra time with the couple, he can bring to light and eradicate the superstitions or wrong impressions they may have regarding sex hygiene.

PROGRESS BEING MADE ON UNIFORM CLAIM FORMS

For several years, the House of Delegates of the Iowa State Medical Society has asked that some effort be made to simplify the claim forms from the many insurance companies in the accident and health fields. At the same time the American Medical Association has reported that negotiations were being carried on with the leading insurance companies to achieve the same end. Consequently, it is satisfying to read an announcement from the Health Insurance Council stating that some forms have already been approved and work on others is still continuing.

More than 100 million persons in the United States are now protected by one or more kinds of health insurance. Of these more than 50 million are covered by the insurance companies, as compared with the 20 million covered in 1947. More than 10 million accident and health claims are handled yearly as a result. These claims amount to almost \$300,000,000 yearly, a very large figure swelling the totals going into medical care channels.

With new policyholders being insured daily, the aggregate number of forms receiving attention from doctors will not diminish but will increase, but there is real hope that the problem of filling out these forms can be made less burdensome. An extensive, all-industry effort toward the goal of uniformity of language, brevity and simplicity began in April, 1953, under the leadership of the Health Insurance Council. Five attending physician's statement forms for use on claims under regular life and group life insurance have received broad company consideration and are now in final draft. Four of them are for disability—two initial and two continuing disability—and one for death claims. A group hospital-insurance uniform claim form was prepared about two years ago and now is in general use in many parts of the country.

The Health Insurance Council consists of nine associations interested in the health insurance field, and these associations have more than 600 insurance companies as affiliates. They handle more than 85 per cent of the health insurance written by insurance companies in the United States.

With so many companies involved, the work of preparing a uniform claim form presents a major problem. One of the first requirements is to settle upon forms that are reasonably brief, and simply and clearly worded, but are still adequate from the standpoint of sound insurance principles and practices. The second is to integrate them into the many existing forms being used by so many companies.

Work on the final uniform claim blanks will necessitate consultation with hospital and medical groups both at the national and local levels. The special committee in charge of the preparation is greatly encouraged by the interest evidenced and by the willingness of many societies to defer plans of their own to achieve the same end. This is one program which should be set up on a national level so that the end result will be uniformity all over the country.

DR. CAUGHLAN RECEIVES MERIT AWARD

Dr. Gerald V. Caughlan, of Council Bluffs, who was installed as president of the Iowa State Medical Society on the following day, was presented the American Medical Education Foundation's Award of Merit, by AMA President-Elect Walter B. Martin, at the State Society's annual banquet on April 27. The citation read: "For your outstanding contribution to the preservation and continuance of the high standards of medical education in the United States."

The award was given to Dr. Caughlan specifically for his work on behalf of the Foundation in 1953, but he has been an active supporter of its work since its establishment in 1951.

In making the award, Dr. Martin took occasion to point out that the Foundation needs and deserves greater participation than the physicians of the country generally, and of Iowa in particular, have given it. Though its fund-raising goal has been \$2,000,000 per year, its program produced \$745,000 in 1951, \$906,000 in 1952 and \$1,089,000 last year.

An average of no more than five per cent of the physicians of Iowa have contributed, he said. Their gifts, totaling \$25,000 since 1951, are less than half of the \$68,000 which the Foundation has allotted to the College of Medicine at S.U.I. during that period. "If every physician in the United States gave a \$25 gift to the Foundation each year," he declared, "the total would surpass the goal we seek."



DR. CHITTUM IS GP OF THE YEAR

Dr. John H. Chittum, 87, who has taken care of families in and around the town of Wapello, in southeast Iowa, for more than 54 years and still is doing so, was named the state's outstanding general practitioner of 1954 at the Iowa State Medical Society's annual meeting in Des Moines late in April. He had been nominated for the honor by the Louisa County and Des Moines County medical societies and by a large number of citizens of the area.

Dr. Chittum was graduated from Keokuk Medical College in 1897, came to Wapello in 1899 and has practiced there ever since. In making the award, the Society noted that he has answered calls on foot when roads were impassable, on horseback, by team and buggy, by freight train, rowboat, farm wagon, manure spreader, old-fashioned handcar, farm tractor, and, after his purchase of a 1907 Cadillac, by automobile.

In between times he has been mayor of his town, helped organize the Boy Scout troop there, helped get sports equipment for Wapello youth, cooperated with the county welfare agencies and schools, and done church work.

He is the fourth man to be given the annual award. His predecessors include the late Dr. A. E. Wanamaker, of Hamburg, Dr. L. F. Hooper, of Indianola, and Dr. Pierre Sartor, of Titonka.

MORE CASES FOR V.A. HOSPITALS

On May 12, Senator Hubert Humphrey (D., Minn.) introduced a bill (S 3441) to establish a 3-year presumptive period for progressive muscular atrophy in veterans. On the same day, the House Veterans Committee favorably reported a bill (HR 8789) granting a 3-year presumption for arthritis, psychosis and multiple sclerosis. That action was contrary to recommendations made by Veterans Administrator Harvey V. Higley and Secretary George F. Lull, of the AMA. The first six such extensions proposed during the current session of Congress were reported on pages 41 and 48 of the January, 1954, issue of the JOURNAL.

LETTER TO THE EDITOR

SIR:

Recently an emergency patient was cared for in my home, and later he was transferred to a hospital. I or we were paid by the patient. The hospital bills were paid by the insurance company, but his bill with us, it refused to recognize.

Now such limitations by the insurance companies drive the small town people to the hospital. Is it any wonder that the small town can't keep a doctor?

Yours truly,

W. E. BULLOCK, M.D.
Lake Park, Iowa

MERITORIOUS SERVICE RECOGNIZED

Two physicians were presented awards of merit at the 1954 annual meeting of the Iowa State Medical Society: Dr. John I. Marker, of Davenport, and Dr. Ransom D. Bernard, of Ames.

Dr. Marker, a psychiatrist and a certified internist, was honored for committee work dating back to 1930, for outstanding contributions to medical economics, finance and education, and for

work toward improvement of care for mental patients.

Dr. Bernard, who carried on a general practice at Clarion for 40 years and afterward, from 1951 to 1954, was general manager of the Iowa State Medical Society, was recognized for his work in the fields of legislation, public relations and medical service.



JOHN I. MARKER, M.D.



RANSOM D. BERNARD, M.D.

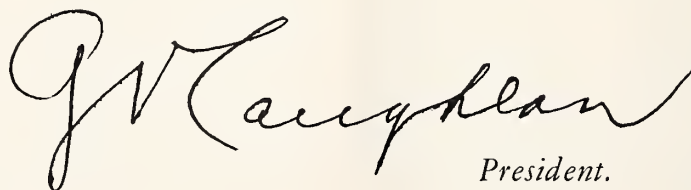
President's Page

The American Medical Association is holding its regular Annual Meeting in San Francisco, California, June 21 through June 25. This is always a valuable meeting for every type of practitioner. The scientific program has something of interest to everyone. Every specialized phase of practice is represented, and papers dealing with many varied subjects will be given.

The scientific and technical exhibits are an education in themselves. They merit a day or more of one's careful study while at the meeting. The technical exhibitors spend much thought in preparing worthwhile exhibits and the scientific exhibitors spare no pains in providing clear and lucid presentations of their particular studies.

The House of Delegates, this year, should be particularly interesting because of the many problems coming before it. We in Iowa are greatly interested in how it will handle our petition for approval of our Principles of Medical Ethics. We will also be interested in the vote on the Cline Report, which has to do with the osteopathic problem. Treatment of non-service-connected disabilities in Veterans Administration hospitals is another matter in which all of us are greatly concerned.

Every Iowa physician should try to attend this session if at all possible. It will be worthwhile from many standpoints.

A handwritten signature in cursive script, reading "J. W. Laughlin". The signature is fluid and elegant, with a large initial "J" and a long, sweeping underline.

President.

BLUE CROSS



BLUE SHIELD

CLAIMS PAID BY TYPE OF SERVICE IOWA BLUE SHIELD IN 1953

SERVICE	NUMBER OF SERVICES	PERCENT OF TOTAL	Total Paid	PERCENT OF TOTAL
MATERNITY				
MISCELLANEOUS	860	0.72	\$ 24,420.00	0.65
DELIVERY	9,314	7.83	556,178.50	14.80
CESAREAN SECTION	431	0.36	42,765.00	1.14
TOTAL	10,605	8.91	\$ 623,363.50	16.59
SURGICAL				
APPENDECTOMY	2,592	2.18	\$ 258,210.00	6.87
TONSILLECTOMY	5,964	5.01	161,016.00	4.29
HERNIOTOMY	1,461	1.23	154,765.00	4.12
CHOLECYSTECTOMY	1,014	0.85	138,310.50	3.68
HEMORRHOIDECTOMY	1,284	1.08	60,370.25	1.61
HYSTERECTOMY	1,294	1.09	165,484.50	4.41
D & C	1,801	1.51	46,764.00	1.25
LIG., SAPH. VEIN	507	0.43	43,350.00	1.15
THYROIDECTOMY	258	0.22	36,817.50	0.98
CYSTOSCOPY	1,652	1.39	44,887.50	1.19
PROSTATECTOMY	258	0.22	37,953.00	1.01
BENIGN BREAST TUMOR	722	0.61	25,734.50	0.69
TRAUMATIC WOUNDS	13,424	11.28	137,680.97	3.66
FRACTURES	4,265	3.58	191,028.90	5.08
TUMORS	4,502	3.78	55,762.35	1.48
ALL OTHER SURGERY	19,873	16.70	744,882.31	19.83
TOTAL SURGERY	60,871	51.16	\$ 2,303,017.28	61.30
ANCILLARY BENEFITS				
ANESTHESIA	17,396	14.62	\$ 184,825.40	4.92
X-RAY--DIAGNOSTIC	11,253	9.46	105,977.40	2.82
X-RAY--RADIUM THERAPY	248	0.21	15,534.50	0.42
MEDICAL CARE--HOSPITAL	18,621	15.64	524,050.60	13.95
TOTAL ALL PAYMENTS	118,993	100%	\$3,756,768.68	100%

Blue Shield and the two Blue Cross Plans in Iowa paid \$13,023,900.82 for professional and hospital services rendered their subscribers in 1953. As the above chart reveals, over three and three-fourths million dollars was the Blue Shield contribution to this great total of service to Iowa people.

The strength of Blue Shield rests with its Participating Physicians. Through their active and whole-hearted cooperation they will not only be contributing to the welfare of the community by servicing the low income patients, but also investing in the stability of the practice of free medicine.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

SURGICAL UROLOGY, by R. H. Flocks, M.D., and David Culp, M.D. (Chicago, The Year Book Publishers, 1954 \$9.75).

ILLUSTRATED REVIEW OF FRACTURE TREATMENT, by Frederick Lee Liebolt, M.D. (Los Altos, California, Lange Medical Publications, 1954. \$4.00).

THE MEANING OF SOCIAL MEDICINE, by Iago Galdston, M.D. (Cambridge, Mass., Harvard University Press, 1954. \$2.75).

FUNDAMENTALS OF OTOLARYNGOLOGY, by Lawrence R. Boies, M.D. (Philadelphia, W. B. Saunders Co., 1954. \$7.00).

A MANUAL OF TROPICAL MEDICINE, by Thomas T. Mackie, M.D., George W. Hunter, III, Ph.D., and C. Brooke Worth, M.D. (Philadelphia, W. B. Saunders Co., 1954. \$12.00).

BOOK REVIEWS

THE 1953-1954 YEAR BOOK OF ORTHOPEDICS & TRAUMATIC SURGERY, ed. by Edward L. Compere, M.D., F.A.C.S., F.I.C.S. (Chicago, The Year Book Publishers, 1953-1954. \$6.00).

Dr. E. L. Compere has maintained his excellent record of combining the important advances in orthopedic and traumatic surgery as reported in the literature of the past year. It is interesting to note that there has been an increase in basic research in those fields, and that interest in surgery of the hand is also mounting.

Certainly all physicians interested in these fields will find much of value in Dr. Compere's new volume.—E. M. George, M.D.

YOU AND YOUR HEALTH, by Edwin P. Jordan, M.D. (New York, G. P. Putnam's Sons. \$3.95).

This book is intended to inform the layman in matters of general health and thereby save the physician's time in explaining the nature of a patient's illness to him.

Each chapter is followed by a question-answer section, culled from the author's newspaper columns. The nature of each disease is discussed simply and briefly, and in perhaps the majority of instances the author is in agreement with current medical thinking. Diagnosis and treatment are sketchily covered, which is a good thing.

At times the author is in error in making general statements which are true only in a few specific instances, and on the other hand, as would be expected in a book which is so brief, he does not point out important exceptions to a general statement. For instance, he fails to distinguish dizziness from vertigo and omits nausea as a symptom in describing Meniere's disease, an entity which he considers very common in old people.

Although he does very well with many of the common diseases, glaring inaccuracies are occasionally to be found.—C. H. Gutenkauf, M.D.

THE YEARBOOK OF DRUG THERAPY (1953-54 Year Book Series), edited by Harry Beckman, M.D. (Chicago, The Year Book Publishers, Inc. \$6.00).

Any book that is written or edited by Dr. Harry Beckman is well done, and The Year Book of Drug Therapy is no exception. This year, as in the past, many articles are well abstracted, well catalogued and well indexed. Frequently Dr. Beckman takes time off to comment personally on a particular article, sometimes in a complimentary, sometimes derogatory tone, but always in a keenly analytical manner.

This particular volume, which garners articles from journals received from August, 1952, to August, 1953, spends a great deal of its space in a discussion of the action of antibiotics in disease. ACTH and cortisone are also well covered, as well as are such miscellaneous drugs as those used in peripheral vascular, hematological and cardiac disorders. The table of contents ranges from allergy to venereology.

As with its predecessors, and Year Book siblings in other fields, this book should not be read from cover to cover. Rather, it is one to read when one has "fifteen minutes a day" in which to squeeze in some medical readings, either at bed time or while one is waiting for his wife to put on her make up.—Daniel A. Glomset, M.D.

EPILEPSY AND THE FUNCTIONAL ANATOMY OF THE HUMAN BRAIN, by Wilder Penfield, M.D., and Herbert Jasper, M.D. (Boston, Little, Brown & Co., 1954. \$16.00).

This finely printed and assembled volume deserves prominent place on the bookshelf of those doctors who are interested in epilepsy and/or human neurophysiology.

The book is impressive, for it contains 844 pages (19 chapter headings), a 35 page bibliography, and an adequate index. The story of epilepsy and human neurophysiology are subtly interwoven, although the reader seeking definite points of information on either subject will have no trouble in finding what he wants.

The discriminating reader may challenge certain findings and conclusions. The hypothesis is proposed that in either expanding or atrophic cerebral lesions, a continuing or recurring ganglionic ischemia irritates nerve cells and that it is this ganglionic ischemia which is the cause of epileptic discharge. Can one be sure that the minor atrophic lesions are always etiologic, and not sometimes an incidental finding? This reviewer is hesitant to accept the anatomical cause-and-effect relationships which are assumed to occur in one case presentation after another.

The sections on classification, experimental epilepsy, functional cortical localization, electroencephalography, and medical and surgical therapy will interest the general reader, and special subjects are treated in such detail as to satisfy the profound student.

The authors and publisher are to be congratulated for making such a unique neurosurgical experience available in such fine form to the medical profession. The book is enthusiastically recommended.—John T. Bakody, M.D.

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Executive Secretary—Mrs. Elizabeth Nelson, 3600 Franklin, Des Moines

THE AAGP PROGRAM EXPANDS

The 1954 Annual Meeting of the AAGP, which was held in Cleveland in March, brought forth some constructive programs of a very important nature. As a result of these projects, we are sure that the organization of general practitioners of America is going to take its place as a leader in American Medicine.

MEDICAL EDUCATION

The Academy has been asked to give advice to medical schools concerning the preparation of medical students to become good general practitioners. To establish facts upon which some valuable suggestions might be given, it has been decided that some basic information must be obtained. The first thing to find out is exactly what does the general practitioner do. From that it is hoped that further studies will reveal what the general practitioner of the future must be trained to do. To get the basic material, a survey is to be undertaken, beginning next month, by our Commission on Education of which Dr. William J. Shaw, of Fayette, Missouri, is chairman. A large number of our membership will be asked to participate and give information in a specified number of consecutive cases. These checks will be taken again at various seasons of the year, the idea being that if all were taken at one time, seasonal conditions might obscure the over-all scope of the general practitioner's cases. For example, it is thought that summer checks might reveal a large number of summer diarrheas and winter checks a large number of respiratory cases. Thus it will try to level all those off by spot sampling throughout the year. This will provide an accurate base on which to predicate some conclusions about the things a general practitioner must know.

These facts will then be integrated into a plan proposed by Dr. Holland T. Jackson, of Fort Worth, Texas, to define the general practice of the future and present the definition to medical educators in accordance with their request. This will be one of the most momentous steps in the advancement of medical education since 1910, when Abraham Flexner initiated our present system of standardization of medical colleges. We feel that this problem is within the scope of our basic purposes as an organization of America's top-ranking

general practitioners. It will ultimately provide the public with well-trained family doctors and, within the profession, will prevent any sniping at these men, so trained, by others who may have some ax to grind. The public will eventually be made aware of the value of such a well-trained family counsellor in medicine and the definition of his capabilities. This value will be reflected by his abilities and the improved quality of his service, as well as by a decrease in cost of medical care.

MEDICAL PRACTICE

Dr. Fount Richardson of Fayetteville, Arkansas, gave a stirring address at the last session of the Congress of Delegates demanding: (in his own words)

"1. Open every hospital to the family doctor.

"2. See that every patient be under the immediate care of his personal physician and whatever technical assistance he feels might be required.

"3. Require immediate revision of the rules of the various regulating agencies (e.g. the Joint Commission on Accreditation of Hospitals) to effect the first two demands."

The whole address is a masterpiece and would be reprinted in toto if space permitted. But to transmit the ideas into action, the Congress of Delegates referred the matter to the Board of Directors and the appropriate commission with instructions to "take whatever steps are necessary to initiate the realization of these objectives at the earliest possible date."

In effect, this is an order from the Congress of Delegates to crystallize a long-range program for the AAGP to provide adequate family care for the American Public and provide the family doctor with adequate facilities to carry it out.

DR. MERRILL SHAW MEMORIAL

To implement this objective and as a memorial to our beloved member and officer, Dr. Merrill

(Continued on page 273)

Annual Meeting, Iowa Academy of
General Practice

Hotel Savery, Des Moines

September 22 and 23

STATE DEPARTMENT OF HEALTH

Edmund G. Zimmerman
COMMISSIONER

MORBIDITY REPORT

Disease	Apr. 1954	Mar. 1954	Apr. 1953	Most cases reported from these counties
Actinomycesis	1	—	—	Marshall
Diphtheria	0	1	1	.....
Conjunctivitis	25	—	—	Page and Pottawattamie
Scarlet Fever	212	361	224	Harrison, Polk, Scott
Typhoid Fever	1	0	1	Muscatine
Smallpox	0	0	0	.....
Measles	2227	1102	3362	Des Moines, Hancock, Har- rison, Pottawattamie, Scott
Whooping Cough	10	9	11	Linn, Lucas
Brucellosis	13	13	31	Scattered—1 to a county
Chickenpox	1187	1140	873	Boone, Dubuque, Linn, Scott
Meningococcus				
Meningitis	3	3	4	Buchanan, Page, Woodbury
Mumps	1091	773	755	Calhoun, Harrison, Potta- wattamie, Scott
Poliomyelitis	7	4	4	Allamakee 2, Clinton 1, Henry 1, Jefferson 1, Polk 1, Webster 1 (1 Paralytic; 2 non-para; 4 unspecified.)
Infectious Hepatitis	495	483	202	Clinton, Hancock, Scott, Webster
Trichinosis	1	—	—	Dallas
Rabies in Animals	45	23	25	Polk 5, Davis 4, others 1 to 3 to a county
Tuberculosis	63	59	43	For the state
Syphilis	110	129	127	For the state
Gonorrhea	53	52	30	For the state

IMPORTANT POINTS IN BABY FEEDING

1. Feed the baby only when he cries for food. The young baby spends most of his time sleeping and eating. He usually eats until he is full and then goes to sleep. He sleeps until his stomach is empty, hunger pains wake him and he wants to eat again. If fed before he is hungry, he won't eat a full meal and he won't sleep properly. A full stomach helps produce sleep.

2. Feed him promptly when his crying tells you that he is hungry. We no longer believe in making the baby wait for a feeding until the adult or the clock says it is meal time. If his hunger is not satisfied and he is allowed to cry, he tires himself and will not eat properly. During prolonged crying he may swallow air. This will partially fill his stomach so that he will not eat a full feeding. If he does not get a complete feeding, he will soon be hungry again.

3. Feed him with a nipple that has the right openings. For babies that are bottle fed, care must be taken that the nipple has the right sized openings. If the openings are too small, babies have to work so hard to eat that they go to sleep before

getting sufficient milk. The baby then wakes too soon and becomes another feeding problem. The remedy is simply to enlarge the holes with a needle, reboiling the nipple before replacing it on the bottle. Do not enlarge too much however. When holes are too large the milk comes too fast and the baby may swallow air. The holes are about right if the drops fall 2 or 3 inches apart when the bottle with nipple is inverted.

4. Feed the baby in an upright position. X-rays show that if a baby is fed lying down, a large air bubble forms on top of the milk in his stomach. Because it cannot escape, he never gets completely full when fed in a lying-down position. Furthermore, he needs the feeling of security which being held during feeding gives him.

5. Feed him all he wants. Recent studies by Dr. Charles Tompkins and Fletcher Slater of the University of Nebraska show that a baby will not take too much milk. We do not need to know how much either a breast-fed or bottle-fed baby takes. Just give him all he wants. When a baby fills himself to capacity at every feeding, most feeding problems will vanish.

6. Bubble him if you wish, but treat him gently. It is now felt by many authorities that a baby will bubble himself, if need be, without help. If a baby does not "burp" after a feeding, he will not necessarily get colic. Your baby may be held over your shoulder at the end of the feeding period to facilitate bubbling if you wish, but he should not be pounded on the back. Neither should he be interrupted for "burping" while still nursing vigorously. This will anger him and interfere with his feeding.

ADJUSTMENT BETTERS DEATH RATES

The crude death rate among white people in the U. S. fell from 10.4 per 1,000 population in 1940 to 9.5 in 1950, a decrease of 9 per cent, but this rate of decline understates the actual progress achieved in reducing mortality because it was influenced by a rise in the proportions of babies and of older people in the population—groups in which the death rate is still relatively high.

The Metropolitan Life Insurance Company, in its STATISTICAL BULLETIN for March, 1954, points out that if the age distribution of the population had been the same in 1950 as it was in 1940, the reduction in the death rate accomplished during

the decade would have been 21 per cent. This notable improvement, the Company thinks, resulted largely from the wide expansion of hospital and public health services, and from a marked rise in the standard of living.

The decline in the age-adjusted death rate varied from 17 per cent in the West North Central States to 25 per cent in the West South Central States. There was a tendency for the relative decreases to be greatest where mortality was highest, and smallest where mortality was lowest. The West North Central area had the best mortality record in both 1940 and 1950.

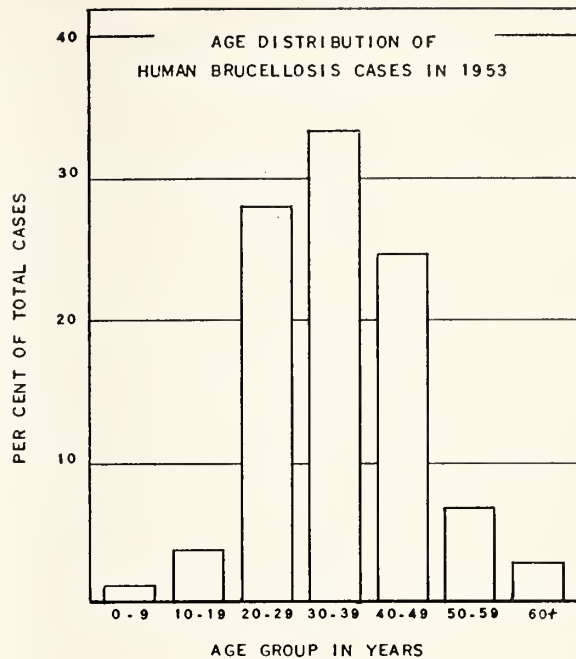
In all sections of the country mortality fell in every age group. In the age range under 35, the reduction during the decade ranged between a third and a half, in the various geographical areas. At ages 35-44 the decrease was somewhat less than one-third in virtually every part of the country, and at ages 45 and over it varied from about one-fifth to one-seventh.

For the age range 35-64 years, the West North Central States had a lower death rate than any other section of the country.

HUMAN BRUCELLOSIS IN IOWA IN 1953

During 1953, Iowa physicians reported 556 human cases of brucellosis. The county distribution of these cases, as well as of the 1952 cases, is shown on the table below. For comparison, the cases reported for the last four years are as follows:

1950—549 cases



1951—767 cases

1952—724 cases

1953—556 cases

The age distribution of the cases in 1953 follows the pattern set in previous years. Brucellosis is most likely to occur among young adults because they are the ones most likely to be in contact with infected animals. The graph shows that 86 per cent of last year's cases were among persons in the age groups 20 through 49.

COUNTY DISTRIBUTION OF CASES FOR 1952 AND 1953

Cases					
County		Cases 1952 1953	County		Cases 1952 1953
Adair	2	6	Floyd	6	13
Adams	1	1	Franklin	10	5
Allamakee	3	0	Fremont	1	0
Appanoose	4	4	Greene	2	2
Audubon	6	1	Grundy	2	7
Benton	6	5	Guthrie	1	1
Black Hawk	17	22	Hamilton	11	3
Boone	6	5	Hancock	5	4
Bremer	5	8	Hardin	5	6
Buchanan	7	4	Harrison	2	4
Buena Vista	16	7	Henry	5	2
Butler	3	4	Howard	3	3
Calhoun	1	0	Humboldt	2	1
Carroll	3	1	Ida	5	4
Cass	8	5	Iowa	6	2
Cedar	3	5	Jackson	4	3
Cerro Gordo	46	15	Jasper	4	5
Cherokee	7	8	Jefferson	1	1
Chickasaw	6	3	Johnson	8	16
Clarke	4	1	Jones	6	11
Clay	5	11	Keokuk	8	8
Clayton	9	7	Kossuth	4	4
Clinton	7	1	Lee	3	2
Crawford	5	3	Linn	28	15
Dallas	6	9	Louisa	4	2
Davis	11	8	Lucas	5	5
Decatur	5	3	Lyon	3	3
Delaware	3	6	Madison	3	4
Des Moines	4	1	Mahaska	8	7
Dickinson	3	4	Marion	4	7
Dubuque	36	42	Marshall	10	9
Emmet	5	5	Mills	1	2
Fayette	2	8	Mitchell	4	3
TOTAL:				724	555

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. LESTER R. HEGG, Rock Valley

President-Elect—MRS. CHARLES H. FLYNN, 709 W. 15th Street, Clarinda

Secretary—MRS. ROBERT P. MASON, 5818 Chamberlain Drive, Des Moines 12

Treasurer—MRS. HOWARD H. SMEAD, 3333 Grand Avenue, Des Moines 12

SILVER ANNIVERSARY MEETING

The twenty-fifth Annual Meeting of the Woman's Auxiliary to the Iowa State Medical Society opened with an Executive Board meeting at the Savery Hotel, Des Moines, on April 27. The President, Mrs. Edward B. Hoeven, presided at all meetings. Reports of the State Officers, Committee Chairmen and County Presidents were distributed in printed form. The Treasurer, Mrs. Howard Smead, Des Moines, reported a balance on hand of \$2,970.81. There will be no change in dues.

First Vice President and Organization Chairman, Mrs. Charles Flynn, Clarinda, reported a paid membership of 850. There are now 41 organized counties, 6 new ones having been added the past year and 1 has been re-activated. There were 34 organized counties last year.

Mrs. William Chase, Jr., Des Moines, Chairman of Finance, presented a \$2,700.00 budget for 1954-55. She pointed out that the State Medical Society pays 8c mileage for Board members to and from Board meetings. The Auxiliary, however, will pay only 4c mileage for officers attending other Auxiliary meetings in the state than State Board meetings.

Mr. L. C. Murray of the State Health Department presented details of a radio and television quiz kid show based on health questions answered in *TODAY'S HEALTH*, with an eye to promoting circulation of that magazine as the only authoritative one in its field. Children of junior high age have been found to be the best participants, and the program has been used in several places quite successfully. Any Auxiliary which would like to combine a Public Relations project and *TODAY'S HEALTH* will find the quiz kid show made to order. Contact Mr. Murray at the State Health Department, Des Moines.

Dr. Frank Coleman, Legislative Chairman of the Iowa State Medical Society, discussed national legislation of medical interest. The present legislation, in spite of early assurances to the contrary, sounds very much like some promoted by the previous administration. The AMA opposes extension of social security to include physicians, for to receive benefits comparable to those received by other people, they would have to retire at 65. Doctors resent the idea of compulsion. Re-insurance for voluntary insurance plans will probably die in Congress.

E. G. Zimmerer, M.D., Iowa Commissioner of Health, approved the federal government's reducing grants in Iowa and allowing the State Health Department to use money where it is needed, instead of earmarking it.

Dr. Coleman stated that there is a legislative contact man in every county medical society. These men are expected to visit candidates for public office and discover their views on medical legislation. The state manual on legislation, prepared as a result of these surveys, helps to determine the policy of the Iowa State Medical Society.

Auxiliary activity is appreciated by the State Medical Society, and members are urged to contact the Legislative Committee if they have provocative ideas or need information.

Following the morning meeting, there was a Dutch Treat luncheon and a style show at Younker's Tea Room. In the afternoon, there was a tour of the Meredith Publishing Company.

The meeting on Tuesday morning was formally opened by the President, Mrs. Hoeven, and the invocation was given by Rev. Frederick J. Weertz.

Mr. Carl Gernetzky, Chairman of the Finance Committee of the State Board of Education, discussed the duties of that body and emphasized particularly the relationship with the Medical Society and College of Medicine at Iowa City. The doctors who teach in the College of Medicine are allowed to maintain private practice. After office expenses are paid, money over and above an established quota is placed in a rotating trust fund which allows for research, for eventual financial assistance from pharmaceutical and other groups interested in medical progress, and, finally, for fellowships. This system has proved fairly satisfactory, for it is unlikely that Iowa, either now or later, will pay \$50,000.00 a year to doctor-professors, as some states do.

Mrs. George Watters, assisted by Mrs. Elmer A. Vorisek at the organ, presented a lovely memorial service. With a background of Mendelssohn's "Consolation," Mrs. Watters, after lighting a tall white candle on either side of the lectern, read "The Twenty-Third Psalm," the names of the deceased and Riley's wistful poem "She's Just Away."

The Nurses' Chorus from the Iowa Lutheran School of Nursing, Des Moines, directed by Mrs.

Hannah Potter sang three numbers: "This Is My Country," "I Believe," and "Jesus, Our Lord, We Adore Thee." The music was fine and greatly enjoyed.

Mrs. E. A. Larsen next introduced approximately 60 members of Future Nurses Clubs from all over Iowa. Their sponsors accompanied them.

Mrs. Noble Irving, Des Moines, Convention Chairman, was introduced. There were 209 who registered at the Annual Meeting, 54 of whom were delegates.

At the luncheon which was held in the Terrace Room, there were a number of distinguished guests: Walter B. Martin, M.D., President Elect of the AMA; Mrs. George Turner, President Elect of the Woman's Auxiliary to the AMA; Robert N. Larimer, M.D., President of the Iowa State Medical Society; Gerald V. Caughlan, M.D., President Elect of the Iowa State Medical Society; L. A. Coffin, M.D., Chairman of the Board of Trustees of the Iowa State Medical Society.

Dr. Martin discussed the AMA's opposition to the proposed re-insurance policy of the government. Voluntary insurance has increased from 9 to 93 million. Should the government gain the desired control, it would subsidize cases which might not be insured under ordinary circumstances. The program does not offer enough to cover its inherent dangers. Although hospital groups favor the plan, commercial companies are opposed, and it is unwise to place so much authority in the hands of the Secretary of Health Education and Welfare.

Mrs. Turner's topic was "The Auxiliary Is You." All of the states and two territories have Auxiliaries with a membership last spring of 64,000. Even so, the difference between membership in the AMA and the Auxiliary is appalling. The goal this year is a 10 per cent increase in membership. As doctors' wives and as Auxiliary members, our Public Relations should stem from the Auxiliary background. We need to participate in civic activities which promote health and safety. This may be accomplished by adapting the Auxiliary program to Public Relations.

We need to support the American Medical Education Foundation Fund and TODAY'S HEALTH, to read THE BULLETIN, to keep informed on proposed medical legislation, to work hard at nurse recruitment and the maintenance of scholarship loan funds, and to learn about civil defense, mental health and the institutions which deal with that and with rehabilitation.

Mrs. Turner was called upon to award the past presidents' pins to 13 past presidents who were seated in front of the speakers' table. Among them was the beloved first president, Mrs. M. N. Vol-deng, Independence, upon whom the first honorary membership was conferred at this Silver Anniversary of the Woman's Auxiliary to the Iowa State Medical Society. Others who received pins were: Mrs. W. A. Seidler, Jamaica; Mrs. J. A. Downing,

Des Moines; Mrs. C. A. Boice, Washington; Mrs. S. E. Lincoln, Des Moines; Mrs. E. T. Warren, Stuart; Mrs. W. R. Hornaday, Des Moines; Mrs. F. W. Mulsow, Cedar Rapids; Mrs. J. C. Decker, Sioux City; Mrs. Fred Moore, Des Moines; Mrs. A. G. Felter, Van Meter; Mrs. H. W. Smith, Woodward; Mrs. Lonnie A. Coffin, Farmington. Mrs. Hoeven received her pin at the Wednesday morning meeting. She observed that the Dallas-Guthrie Auxiliary seemed to be the birthplace of State Presidents, for eight of them have come from there.

Following luncheon, the Drama Department of the Des Moines Women's Club gave a memorable performance of Clare Booth Luce's comedy "The Women."

Announcement of the county exhibit winners will appear in another issue. Quality of the exhibits was on a very high level and added much to the entire meeting.

Mrs. Noble Irving, Mrs. Benjamin F. Kilgore, Mrs. Herbert C. Merillat and all of the members of their splendid committees deserve high praise for their gracious hospitality and for all of the planning and hard work which such a meeting demands. Gratitude is due the Iowa State Medical Society for the purchase of the past presidents' pins and prizes for the exhibit contest.

At the Board meeting on Wednesday morning the Memorial Loan Fund Committee, of which Mrs. George Watters is Chairman, was accorded the right to make arrangements for some other method of listing the honored names of the deceased, since the framed scroll is no longer sufficient for this purpose.

A motion was passed recommending to counties that election of officers occur in May, to provide state-wide uniformity and to facilitate work on county and state levels.

Mrs. Turner installed the new officers who had been elected at the Tuesday meeting. They are: Mrs. Lester R. Hegg, Rock Valley, President; Mrs. Charles H. Flynn, Clarinda, President Elect; Mrs. Dean H. King, Spencer, First Vice President; Mrs. James F. Gerken, Waterloo, Second Vice President; Mrs. Robert P. Mason, Des Moines, Secretary; Mrs. Howard Smead, Des Moines, Treasurer. Councilors: Mrs. D. C. Sharp, Dubuque, First District; Mrs. Soren S. Westly, Manly, Second District; Mrs. Frank Eddington, Third District; Mrs. R. S. Gerard, Waterloo, Sixth District; Mrs. A. E. Larsen, Centerville, Seventh District; Mrs. H. A. Spilman and Mrs. E. B. Howell, Ottumwa, Ninth District.

The President will appoint one delegate and alternates to the AMA Convention. Those elected are Mesdames L. R. Hegg, H. J. Peggs, J. B. Gault, E. B. Hoeven, G. B. Nielsen, H. W. Smith, W. B. Chase, L. A. Coffin, and E. A. Vorisek.

MRS. KEITH M. CHAPLER
Publications Chairman

THE NEW PRESIDENT ACCEPTS

To assemble is a by-product of our freedom to govern ourselves, and it is every individual's privilege to have a voice, to cooperate, and to work in associations. It is the American way of life. Stephen Vincent Benet has aptly captured that inner something in these lines:

"For there is a buried thing in all of us,
Deeper than the noise of the parade;
The thing the hater never understands and
never will,
The habit of the Free."

We are proud, and I am sure I speak for all of you, when I say it is this freedom we maintain with our doctor husbands by our membership in a Society of thinking individuals with a desire to sacrifice and build for the betterment of our fellow man. The members of no society hold upon their shoulders more tremendous responsibilities. We owe our assembling together to this great nation whose principles are freedom, justice, and liberty for all, and to those who have sacrificed their lives, who remain forever silent and whose memory we cherish.

Nothing of deeper concern to Auxiliary members exists today than that we continue to progress. Our ideals must remain constant and our aims must be correlated by way of counsel, with those of our Medical Society advisors.

This is our 25th anniversary and installation, again a time when our democratic freedom manifests itself in a change of officers and committees. It has been a privilege for me to have served this Auxiliary in past years as a county president, District Councilor, State Program Chairman, First Vice President, and this past year your President-Elect. As your new President, I sincerely hope I may show sufficient tact and leadership to lead our Auxiliary in the same unified thinking as now exists. I have deep regard for all officers and members of the past years, for my immediate predecessor, Mrs. Hoeven, and for the other officers and committee women whose diligence and sacrifice have made this organization what it is today. I shall humbly attempt to encourage and stimulate continued *positive* growth.

We have a two-fold service to render: (1) Educating ourselves on subjects relative to the medical profession, and, (2) Bringing this message of medicine to our home communities by means of a positive program of action. An old Chinese proverb says: "He that has acquired learning and not practiced what he has learned is like a man who plows but sows no seed." In other words, the informed must reach the uninformed.

A stereotyped program continued from year to year without change would stymie our initiative and originality. We must constantly re-evaluate our program to keep pace with the trend of events in the world today.

Are we, as a part of the health forces, prepared

to cooperate with civil defense and Red Cross? Do we know their disaster programs? Do you in your cities and little towns know how to help change your public school buildings into disaster shelters? I think we all remember the picture in the Des Moines Register of the area that could be destroyed by the dropping of the H-Bomb. Here is a good subject for your meetings.

Are we prepared to help develop safety programs? Are we going to continue to take these accident deaths for granted? Statistics on accidents are appalling.

The Red Cross will process one million c.c. of Gamma Globulin in 1954. Salk Polio inoculations begin the first week in May in three Iowa counties, namely, Linn, Scott, and Woodbury. This entails a tremendous amount of planning and provides duties for voluntary workers. Are you informed and prepared to help if and when this program reaches your area. Let us read and keep abreast of this new development so important to the welfare of our children. File the clippings from the newspapers and discuss them at your meetings. They will provide **GOOD MATERIAL FOR YOUR PROGRAMS!**

Are we evaluating the TV programs with respect to what is good and what is bad?

Are we encouraging the fine arts programs in our communities? At our area conferences next fall, may I recommend at this time that the minor part of our program following the two-fold objectives I have previously mentioned bring into our area meeting the respective local community fine arts. Give all possible moral support to the cultural life of our communities. Our countryside needs more and better cultural life. It is a solution to the problems of child delinquency, mental illness and occupation for the aged and handicapped.

The Nurse Recruitment program is established. Now let us make it continue to grow. Let us give it our undivided support. We need nurses and nurses need us. Give to the loan fund.

Future Nurses Clubs are springing with enthusiasm. They are the pride and glory of many of our Auxiliaries. We hope some films of them will be made in the near future. We are moving in the right direction.

Let us enlarge and help the Iowa Society for the Crippled and Handicapped. Burlington, Des Moines, Dubuque, Fort Dodge, Sioux City and Waterloo are **BLUE BANNER** Medical Auxiliaries in their sales for the Handicapped year after year. We want more cities in Iowa at work for this fine cause. This is what we mean by a positive program of action.

Be a part of the American Medical Education Foundation program by setting aside a sum each year for this worthy project which helps to keep medical schools free from government control.

I quote Mrs. Leo Schaefer, our National President concerning **THE BULLETIN** and **TODAY'S HEALTH** magazines: "The Auxiliary meeting is your school;

THE BULLETIN is your textbook and TODAY'S HEALTH is your means of disseminating authentic health information."

May I leave you with this thought, "*Winners are never quitters and quitters are never winners.*" Give of yourself when you are asked; your reward will be two-fold.

MRS. LESTER R. HEGG
President

PAST PRESIDENT'S REPORT

The Woman's Auxiliary to the Iowa State Medical Society celebrated its Silver Anniversary April 26, 27, and 28, 1954, at the Annual Meeting in Des Moines.

Twenty-five years of service have proved its value to the medical profession and to the many communities where it has served as an organized group. The proof of its worth is manifest in the report of State Officers, Committee Chairmen and County Presidents who have directed the projects suggested by the AMA and the State Medical Society.

All yearly reports are printed in the book of Annual Reports. They should be required reading for everyone connected with the medical profession.

County Presidents and their chairmen are the keys to the success of any program; their leadership and their ability is clearly recognizable in their reports of "work accomplished." Nor can you miss the cheerful cooperation, the friendliness and the satisfying sense of achievement which fills the space between the lines on every phase of auxiliary work reported.

Organization has been stressed this year. Six counties have been organized and several other counties will be organized when the doctors give the signal.

Membership has increased; we hope to have more than 900 members when the books are closed for the year.

Future Nurse Clubs are a popular project; the number of Clubs has more than doubled this year—30. This is a gilt-edged project, in as much as we secure more nurses for our communities, and are the recipients of fine public relations accruing from auxiliary sponsorship of these Clubs.

The Nurse Recruitment and Loan Fund Committee, by action of the Board is set up as an autonomous committee, having its own secretary and bonded treasurer. The double-entry system of bookkeeping and accounting puts this important committee on a business basis ready for action.

Two girls have graduated and repaid their loans; four are in training, now. The complete record and financial report will be found in the report of the chairman, Mrs. A. E. Larsen.

The Committee for the Handicapped continues to grow in public relations value to the Auxiliary,

although its potential for good scarcely has been tapped. Six thousand dollars' worth of merchandise was sold by doctors' wives this year for these unfortunate people.

TODAY'S HEALTH had an encouraging growth in subscriptions.

Three new committees were added this year—Mental Health, Exhibits and Press and Publicity.

The A.M.E.F. and the Memorial Scroll are becoming better known and are making progress.

Most of the organized auxiliaries have carried out one or more projects, and some have worked hard on every phase of auxiliary work.

In spite of the swift tempo of life, many auxiliary members have found time to give volunteer service of all kinds to their communities. The Medical Auxiliary is becoming known to thousands of people as a service group, and as a result, better understanding and a kindly and more charitable attitude of the public toward the medical profession is being fostered. For instance, the C.I.O. has offered to pay the cost of printing of a survey made in Wapello County by the Auxiliary. (Available on request.)

I should like to express my sincere appreciation to the State Medical Society, to the central office for valuable clerical assistance, to Mrs. Lamme in particular, and to the other officers of the State Auxiliary for their tireless efforts and to every individual member who has contributed to worthwhile projects just by being a member. Your loyalty has made the hard work worth while.

MRS. EDWARD B. HOEVEN
Immediate Past President

SPEAKERS' BUREAU SCHEDULES

RADIO

WOI—Thursday at 11:15 a.m.

"TRAIN UP A CHILD"

- June 3 Keeping Your Baby Well
- June 10 Growth and Development
- June 17 .. The Child and His Brothers and Sisters
- June 24 "Discipline" Is Not a Bad Word

WSUI—Tuesday at 11:45 a.m.

"MAIN STREET MEDICINE"

- June 1 Rural Doctor Supply
- #### "TIME OUT"
- June 8 Healthful Living
 - June 15 Sleep
 - June 22 Play
 - June 29 Leisure

Television broadcasts will be resumed in the fall

COUNTY SOCIETIES

MEETINGS

Black Hawk

The May 18 meeting of the Black Hawk County Medical Society heard Dr. Walter D. Abbott, of Des Moines, discuss "Management of Cerebral Vascular Lesions."

Clinton

A physician-pharmacist joint meeting was held on April 20 at the Clinton Country Club, with the pharmacists of Clinton County as hosts. Representatives of the State Medical Society and the Iowa Pharmaceutical Association, and the legal counselor for both organizations, Mr. I. W. Myers, spoke.

Delaware

Dr. Jerrald Greenblatt, of Cedar Rapids, discussed prematurity at the May 3 meeting of the Delaware County Medical Society, in Manchester.

Dubuque

Dr. Franklin H. Top, head of the Department of Hygiene and Preventive Medicine at S.U.I. addressed the Dubuque County Medical Society on May 11 regarding poliomyelitis and poliomyelitis vaccine.

Johnson

The medicine and surgery departments at University Hospitals presented the scientific program at the May 5 meeting of the Johnson County Medical Society, on "Problems in Diabetes Mellitus."

Monona

Dr. E. B. Floersch, of Council Bluffs, past president of the Iowa Heart Association, spoke at the April 28 meeting of the Monona County Medical Society, in Onawa, on heart-disease problems. The members of the County Nurses' Association were guests of the Society.

Polk

At the April 21 meeting of the Polk County Medical Society, Dr. James J. Waring, of Denver, Colorado, spoke on "Chemotherapy in Tuberculosis."

Pottawattamie

Dr. J. J. Keegan, of the University of Nebraska, spoke on "Treatment of Herniated Discs" at the April 20 meeting of the Pottawattamie County Medical Society. Dr. Keegan is head of the University's Department of Neurosurgery and is a former dean of its College of Medicine. About 35 doctors attended.

Sac

At the monthly meeting of the Sac County Medical Society held in Sac City on April 8, Mr. Gerhard Hartmann, the superintendent of University Hospitals, Iowa City, spoke on problems of hospital management.

Scott

Dr. Roger A. Harvey, professor and head of the Department of Radiology at the University of Illinois College of Medicine, addressed the Scott County Medical Society's May 4 meeting on "The Latest Developments in Radiation Treatments of Cancer." Also at that meeting, representatives of the Iowa State Medical Society presented a plaque to the Scott County Society and the Davenport Newspapers, Inc. in recognition of public service in connection with the 1953 Health Forum series. This is the first award ever made by the State Society to newspapers for a service of this type.

DEATHS

Dr. Clark Claude Griffin, Jr., 81, who had practiced at Vinton more than 50 years, died on May 1, at Orlando, Florida, about a week after suffering a cerebral hemorrhage. A life member of the Iowa State Medical Society, he had been in virtual retirement for the past ten years.

Dr. William H. Cash, 83, a practicing physician at Lenox for 44 years, died on April 23 at Rochester, Minnesota.

Dr. Ralph E. Wiley, 72, of Fontanelle, died of a heart ailment there on April 23. He was a graduate of the College of Medicine at the University of Michigan and had practiced 44 years, the last 21 of them at Fontanelle.

Dr. Rolla W. Perkins, 80, who was a physician at Sioux City and a member of the Iowa State Medical Society for 30 years before 1947, when he moved to California, died on May 2 following a heart attack.

Dr. Frank Nathan Mead, 85, of Cedar Falls, a life member of the Iowa State Medical Society and health-director emeritus of the State Teachers College, died suddenly of coronary thrombosis on May 5.

Dr. Albert Edward Shaw, 73, who had practiced at Des Moines since 1912 and was for many years Polk County coroner, died on April 7 at his home there. Because of a heart ailment, he had been in partial retirement for two or three years.

EXCESS OXYGEN MAY INJURE INFANTS

Excessive administration of oxygen to premature infants may be directly related to the development of retrolental fibroplasia, in the opinion of Drs. Jonathan T. Lanman, Loren P. Guy and Joseph Dancis, of New York.

In the May 15 issue of *JAMA*, they report results of a year-long study in which they gave a high concentration of oxygen to 36 babies and a low concentration to 28, in incubators at the Bellevue Hospital Premature Nursery. In the group receiving a high concentration, eight developed irreversible retrolental fibroplasia. Six of those infants are believed to have no useful vision, and the other two have useful vision in no more than one eye.

In the group of infants receiving a low concentration of oxygen—oxygen only when breathing difficulty occurred—only two showed even the early and reversible stages of the disease, whereas 22 (61 per cent) of the group that got a high concentration showed early stages of it.

Twenty per cent of the group receiving a high concentration of oxygen died, as against 30 per cent of those in the low-concentration group, but the doctors point out that since five of the latter group died from causes unrelated to oxygen therapy, the death rates to be considered in evaluating the experiment are identical—20 per cent.

Retrolental fibroplasia, first recognized as a disease of premature infants in 1942, now is first among the causes of blindness in American children, and is thought to be the foremost problem other than death itself in the care of premature infants.

In their conclusions, the doctors said, "Reversible, vascular stage lesions occurred in both groups, but with nine times the frequency in the group with high oxygen concentrations. . . . We believe that retrolental fibroplasia is directly related to the excessive administration of oxygen and can be controlled by severely limiting oxygen

therapy to premature infants. Such restriction does not appear to be harmful."

AAGP Program Expands

(Continued from page 265)

Shaw, of Seattle, Washington, who died on April 24 after a four-year fight against cancer of the bowel, the AAGP will begin a nationwide campaign summed up by the slogan, "A Family Doctor for Every Doctor's Family." The benefits of this objective are immediately obvious, with doctors' death rates from coronary disease, *et cetera*, heading the lists. When this has been reasonably accomplished, it is hoped that the campaign can be broadened to provide "A Family Doctor for Every Family." But the example set by doctors themselves can be pointed to for the American public profitably to emulate.

DUES

To provide for the added service programs, although the Academy's finances are sound under present circumstances, the Congress of Delegates readily voted an increase of dues to the AAGP of \$4.50 per year effective January 1, 1955.

APPEAL MADE TO FIRMS FOR MEDICAL SCHOOL FUNDS

"America spends more money on tombstones than on medical schools," Dean Norman B. Nelson, of the S.U.I. College of Medicine, told a meeting of 40 businessmen who are soliciting funds from Iowa firms for the support of medical education. The total state appropriation for the S.U.I. medical college is \$1,250,000, he reported. The College has 460 medical students, 1,200 undergraduates take courses in the school, it has 400 graduate students other than those who are candidates for M.D. degrees, and it has 130 doctors taking specialty training.

Mr. W. F. Poorman, president of the Central Life Assurance Co. and chairman of the Des Moines committee of the National Fund for Medical Education, said it is hoped that between \$40,000 and \$50,000 can be raised by his group this year. Under the arrangement that permits the donors to earmark their gifts for the schools of their choice, all of that money would go to S.U.I.

"Medical schools," Mr. Poorman said, "on the average require 30 per cent of the total university budgets, yet the enrollment in medical schools is only 10 per cent of the total. If these schools are to continue to operate, they need additional funds, either from governmental or from private sources."

Toward the \$29,095 that the National Fund for Medical Education made available to S.U.I. last year, \$13,271.21 was contributed by 18 Iowa firms through the Des Moines committee.

COUNTY MEDICAL SOCIETY OFFICERS

COUNTY	PRESIDENT	SECRETARY	DEPUTY COUNCILOR
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Carroll.....	J. R. Morrison, Glidden.....	J. M. Tierney, Carroll.....	J. R. Martin, Carroll
Cass.....	L. L. Long, Atlantic.....	E. M. Juel, Atlantic.....	Ralph Moe, Griswold
Cedar.....	H. E. O'Neal, Tipton.....	O. E. Kruse, Tipton.....	P. M. Hoffman, Tipton
Cerro Gordo.....	J. W. Lannon, Mason City.....	R. C. Brown, Mason City.....	H. G. Marinos, Mason City
Cherokee.....	H. J. Fishman, Cherokee.....	J. B. Blair, Cherokee.....	C. E. Broderick, Cherokee
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			A. M. Cochrane, Perry
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Howard.....	W. G. Doss, Cresco.....	C. E. Swanger, Cresco.....	P. A. Nierling, Cresco
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Kossuth.....	D. L. Bray, Algona.....	J. M. Schutter, Algona.....	M. G. Bourne, Algona
Lee.....	G. J. McMillan, Ft. Madison.....	Sebastian Ambery, Keokuk.....	R. E. Cooper, Keokuk
			R. L. Feightner, Ft. Madison
Linn.....	R. Y. Netolicky, Cedar Rapids.....	E. L. Lindley, Cedar Rapids.....	
Louisia.....	J. H. Chittum, Wapello.....	K. T. DeYarman, Morning Sun.....	J. H. Chittum, Wapello
Lucas.....	Dean Curtis, Chariton.....	R. E. Anderson, Chariton.....	R. E. Anderson, Chariton
Lyon.....	H. H. Gessford, George.....	S. H. Cook, Rock Rapids.....	S. H. Cook, Rock Rapids
Madison.....	R. W. Carson, Winterset.....	J. E. Evans, Winterset.....	C. B. Hickenlooper, Winterset
Mahaska.....	G. W. Bennett, Oskaloosa.....	L. F. Catterson, Oskaloosa.....	E. B. Wilcox, Oskaloosa
Marion.....	C. R. Burroughs, Knoxville.....	T. D. Clark, Knoxville.....	H. L. Bridgeman, Knoxville
Marshall.....	D. D. Harris, Marshalltown.....	H. E. Sauer, Marshalltown.....	R. C. Carpenter, Marshalltown
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Mitchell.....	Wm. E. Owen, St. Ansgar.....	R. H. Huber, Osage.....	T. E. Blong, Stacyville
Monona.....	P. G. Ingham, Mapleton.....	P. L. Wolpert, Onawa.....	C. W. Young, Onawa
Monroe.....	R. A. Smith, Albia.....	H. J. Richter, Albia.....	H. J. Richter, Albia
Montgomery.....	R. S. Smith, Red Oak.....	G. M. Skallerup, Red Oak.....	E. L. Croxdale, Villisca
Muscatine.....	W. W. Daut, Muscatine.....	T. M. Miller, Muscatine.....	C. P. Phillips, Muscatine
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Osceola.....	E. S. Aelits, Sibley.....	M. F. Rizzo, Sibley.....	F. M. Rizzo, Sibley
Page.....	N. B. Bingham, Clarinda.....	K. V. Jensen, Clarinda.....	C. H. Flynn, Clarinda
Palo Alto.....	R. D. Workman, Reuthven.....	C. C. Moore, Emmetsburg.....	H. L. Brereton, Emmetsburg
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Polk.....	E. P. Lovejoy, Des Moines.....	T. A. Bond, Des Moines.....	M. T. Bates, Des Moines
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Scott.....	W. J. Balzer, Davenport.....	A. B. Hendricks, Davenport.....	P. A. White, Davenport
Shelby.....	R. E. Donlin, Harlan.....	E. J. Vosika, Shelby.....	R. E. Donlin, Harlan
Sioux.....	E. B. Grossman, Orange City.....	C. B. Murphy, Alton.....	Wm. Doornink, Orange City
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Tama.....	R. E. Dunn, Dysart.....	A. J. Havlik, Tama.....	A. J. Havlik, Tama
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Wapello.....	D. G. Emanuel, Ottumwa.....	E. B. Hoeven, Ottumwa.....	C. A. Henry, Farson
Warren.....	C. A. Trueblood, Indianola.....	R. C. McGeheon, Indianola.....	C. A. Trueblood, Indianola
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SURGERY—Surgical Technic, Two Weeks, July 26, August 9
 Surgical Technic, Surgical Anatomy & Clinical Surgery, Four Weeks, August 9, October 11
 Surgical Anatomy & Clinical Surgery, Two Weeks, June 21, August 23
 Surgery of Colon & Rectum, One Week, September 13
 Basic Principles in General Surgery, Two Weeks, September 20
 Breast & Thyroid Surgery, One Week, June 21
 Thoracic Surgery, One Week, October 11
 Esophageal Surgery, One Week, October 4
 General Surgery, Two Weeks, July 26; One Week, October 4
 Gallbladder Surgery, Ten Hours, October 25
 Fractures & Traumatic Surgery, Two Weeks, October 25
GYNECOLOGY—Office & Operative Gynecology, Two Weeks, September 20
 Vaginal Approach to Pelvic Surgery, One Week, June 21
MEDICINE—Two Week Course, September 27
 Electrocardiology & Heart Disease, Two Weeks, July 12
 Gastroenterology, Two Weeks, October 25
RADIOLOGY—Diagnostic Course, Two Weeks, October 4
 Clinical Course, Two Weeks, by appointment
 Radiation Therapy, by appointment
PEDIATRICS—Clinical Course, Two Weeks by appointment
 Congenital & Rheumatic Heart Disease in Infants & Children, One Week, October 11 and October 18
 Two Weeks, October 11
UROLOGY—Two-Week Urology Course, September 20
 Ten-Day Practical Course in Cystoscopy, every two weeks
 Teaching Faculty—Attending Staff of Cook Co. Hospital
 Address: Registrar, 707 South Wood St., Chicago 12, Ill.

The Month in Washington

At the request of the Defense Department, Congress is considering a bill to expand and make more uniform the medical care program for civilian dependents of military personnel. It could have significant impact on the practice of medicine and on medical economics.

The legislation developed out of the Defense Department's Moulton Commission report of a year ago. In the intervening months the department's legislative planners called in representatives of the American Medical Association and other professional groups for advice. But the bill finally presented to Congress is evidence that not all differences of opinion were compromised. While in many respects the measure is in line with the policy of AMA on dependent care, at least one basic conflict remains:

The department's bill states that dependents should receive private medical care only when military facilities are unavailable or inadequate. The AMA's policy, adopted after long study of the problem, is that dependents should be cared for in military hospitals and by uniformed physicians only when civilian care is inadequate or unavailable.

There is almost complete agreement that the present patchwork dependent medical care program should be changed to make benefits uniform geographically and within the services, and to spell out the benefits in law. The issue is whether the military medical services should care for all qualified civilian dependents, or dependents should, like the rest of the population, get their medical care from civilian physicians and hospitals.

Under the bill, medical care furnished by or underwritten by the federal government would be limited to "diagnosis, acute medical and surgical conditions, contagious diseases, immunization, and maternity and infant care." Dental care would be allowed only in emergencies or as an adjunct to medical care. These restrictions would be waived overseas and at remote stations in the United States.

The definition of "dependents" would not extend beyond parents and parents-in-law, and these relatives would have to receive at least half their support from the military member to qualify.

The Secretary of Defense would decide what charges, if any, to levy against dependents treated at military facilities. When treated privately, the dependents would pay the first \$10 cost of any illness, plus not more than 10 per cent of the total cost. The secretary could make use of voluntary health insurance for dependents if this system were found to be more economical.

The Senate Armed Services Committee was slow to take up the dependent care bill because

Locum Tenens Available

Several young physicians are anxious to serve as locum tenens during the summer months. Any physician wishing someone to take over his practice temporarily is asked to list himself with the Physician Placement Bureau.

The Bureau also wishes to find openings for the following specialists desiring a location in Iowa.

- 14 Surgeons
- 7 internists
- 4 obstetricians and gynecologists
- 1 radiologist
- 2 dermatologists
- 4 urologists
- 5 pediatricians
- 3 orthopedists
- 1 ologist

Members who know of locations for any of these young physicians are asked to write the Physician Placement Bureau, Miss Mary L. McCord, 529 36th Street, Des Moines 12.



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of a heavy schedule of other hearings. Nor did it make fast progress in the House. There the introduction of the bill was delayed when Chairman Dewey Short (R., Mo.) called on Defense Department to furnish him with detailed information on what the new medical care program would cost.

By mid-May, when Congress had about concluded hearings on all major administration health bills, a new factor was introduced. Chairman Wolverton of the House Interstate and Foreign Commerce Committee called hearings on his own bill for federal guarantee of private loans to health facilities. This was not part of the original Eisenhower health program, but there were some indications that the administration might get behind it.

As originally drawn, the bill would virtually exclude all clinics and hospitals except those operated in conjunction with prepaid insurance plans. During the hearings, Mr. Wolverton indicated he would be willing to drop this restriction. If this were done, the law then would offer benefits to all—fee-for-service physicians and groups as well as “closed panels.”

During this period, some sentiment developed to combine the loan guarantee bill with the reinsurance bill, which wasn't making much progress on its own. The result was a period of confusion and uncertainty, with no clear indication of what either the committee or the administration really wanted.

A few other medically-important bills were advancing on schedule. The House Ways and Means Committee gave every indication of reporting out a bill to require all employers (physicians included) to participate in the federal-state unemployment insurance program. As usual moving faster than the Senate, the House has passed a bill to give state health officers more control over federal grants for public health work. The House also was nearing a vote on extension of the social security program, with no suggestion that physicians and other self-employed groups who don't want coverage would be exempted. The House-approved Hill-Burton expansion bill was awaiting action in the Senate.

IMPROVISED HOSPITAL EXHIBITED

A 200-bed improvised hospital, which the Federal Civil Defense Administration recommends to the states for procurement, has been put on exhibit in Washington, D. C. In actual use, it would be set up in a school house or a church, in all probability. It includes five folding operating tables, a portable x-ray field unit and sufficient expendable supplies for the first 36-48 hours of operation. There are 200 folding canvas cots, plus sheets, blankets and pillows.

The government has 200 of these units on order as part of the FCDA stockpiling program, and 93 more have been ordered by states and cities, to be paid for on a 50-50 matching basis. Cost \$26,435.



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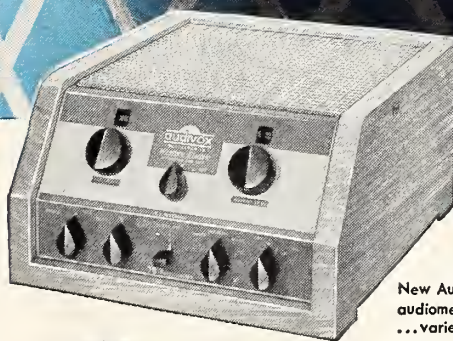
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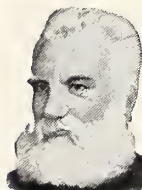
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35-605—Anti-A, B (Group O) Blood Grouping Serum,
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32-102—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid
Tube Test), 2 cc.....Each 3.25
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PERSONALS

Dr. Arthur P. Echternacht, of Fort Dodge, became president of the Iowa Radiological Society for the coming year at its annual meeting held in conjunction with that of the Iowa State Medical Society. **Dr. S. F. Singer**, of Ottumwa, was chosen president-elect; **Dr. James T. McMillan**, of Des Moines, was reelected secretary-treasurer; and **Dr. Wayne K. Cooper**, of Cedar Rapids, was named to the executive committee. The group, known before last year as the Iowa X-ray Club, was founded in 1914.

On June 1, **Dr. Ralph DeCicco** moved from McGregor to Shenandoah.

Dr. Helen Johnston, of Des Moines, has accepted an appointment by Defense Secretary Charles E. Wilson to the Defense Advisory Committee for Women in the Armed Services. The Committee is comprised of 50 women prominent in civic, business and professional fields, and the members serve for three-year terms.

On April 30, a library at the Anesthesiology Division of University Hospitals in Iowa City was dedicated to the memory of the late **Dr. Donald E. Wilkins**, who died of polio while doing military service in Korea, following completion of a residency at S.U.I. The core of the library is Dr. Wilkins' personal collection of books on anesthesiology.

Dr. T. E. Davidson, of Mason City, and his wife left on May 3 for a six-weeks trip to Europe. Dr. Davidson will attend sessions of the American College of Surgeons in London, Leeds and Paris.

Dr. J. L. Saar, of Donnellson, was injured April 30, when his automobile crashed into a wrecker on Highway 2, about five miles west of Fort Madison. His right knee was fractured, several of his ribs were broken, and there were numerous lacerations and bruises.

An Iowa Academy of Surgery was organized at Des Moines on April 26. **Dr. Vernon W. Petersen**, of Clinton, was elected president; **Dr. Robert B. Stickler**, of Des Moines, vice-president; **Dr. William R. Bliss**, of Ames, secretary-treasurer; and **Dr. Robert C. Hickey**, of Iowa City, executive

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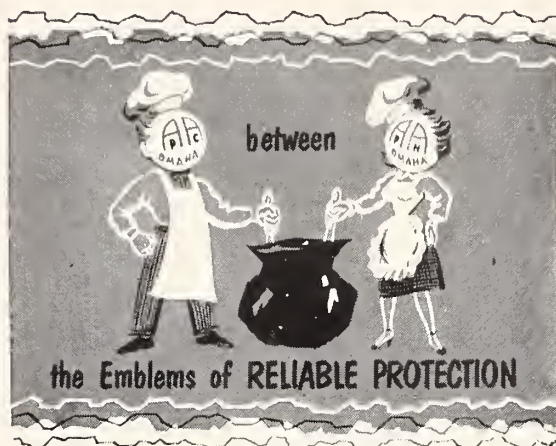
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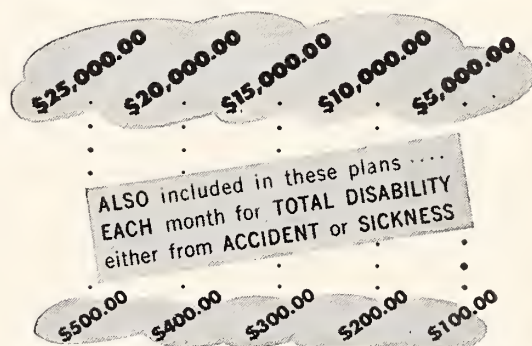
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committeeman. The purpose of the organization, Dr. Petersen said, "is to promote high standards of surgery in Iowa."

Dr. Herbert Shulman, of Waterloo, is the champion of the Iowa State Medical Society golfers. At the annual tournament played on April 27 at the Des Moines Golf and Country Club, he shot a 74 over the par-72 course. Dr. F. M. Stark, of Sioux City, was three strokes behind Dr. Shulman. A field of 56 competed.

On or about July 1, Dr. Philip W. Sorenson will move from Cedar Falls, where he has practiced during the past seven years, to Bellflower, California, a suburb of Long Beach.

Dr. Raymond Light will join Dr. John De Meulenaere in the practice of medicine at Grinnell on August 1. Dr. Light, a 1953 graduate of the College of Medicine at S.U.I., is now serving his internship in Youngstown, Ohio. Dr. De Meulenaere was his preceptor for a month two years ago.

Dr. William B. Bean and Dr. Robert E. Hodges, of the Department of Internal Medicine at S.U.I. have been awarded research grants by Nutrition Foundation, Inc., of New York City, for study on human pathogenic acid deficiency.

Dr. J. G. Kruml and Dr. E. B. Floersch, both of Council Bluffs, presided over sessions of the Creighton University School of Medicine's sixth annual medical assembly, which began on April 22, in Omaha, Nebraska.

On about April 1, Dr. John Enggas moved his practice to Britt from Kellogg, where he had worked for about eight months.

Dr. Denes Farago has joined the staff of McVay Memorial Hospital, at Lake City. He is a 1940 graduate of the Franz Josef Royal Hungarian University medical school, did general practice in several European hospitals before coming to this country, and worked under Drs. P. A. Scott and D. F. Rodawig at Spirit Lake until receiving his Iowa license a few months ago.

Dr. Van W. Hunt, who is a member of the staff of the Park Hospital, in Mason City, has recently been certified by the American Board of Internal Medicine.

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"It is strange," Malleson says, "how little clinical recognition" has been given to the "negative behavior" or "endogenous misery" of the woman with endocrine imbalance. Largely accountable for this, of course, is the patient's own reluctance to discuss these symptoms with her physician until she actually suffers from some of the more obvious menopausal symptoms such as hot flushes. Even then she may become so accustomed to her change in feeling she can't remember what it's like to feel well.¹

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1. Malleson, J.: *Lancet* 2:158 (July 25) 1953. 2. Goldzieher, M. A., and Goldzieher, J. W.: *Endocrine Treatment in General Practice*, New York, Springer Publishing Company, Inc. 1953, p. 23.

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Dr. Clare E. Knouf, of Lake City, has been recalled to spend 17 months' active service with the Navy. He holds the rating of Lt., j.g., and his first duty station is to be Portland, Oregon.

Dr. Louis N. Katz, director of cardiovascular research at Michael Reese Hospital, Chicago, was principal speaker at the Iowa Clinical Medicine Society's state meeting in Davenport on May 8. In a clinic at St. Luke's Hospital, Drs. **H. B. Weinberg**, **George Braunlich** and **A. B. Hendricks**, all of Davenport, and **Dr. W. B. Bean**, of S.U.I., participated. **Dr. H. M. Hurevitz**, of Davenport, was program chairman.

Dr. Graham Parker, of Platte City, Missouri, a surgeon, will join **Dr. S. G. Walton**, **Dr. W. L. Randall** and **Dr. R. E. Munns** at the Hampton Clinic, in Hampton, on or about July 1.

Dr. W. H. Mott, of Farmington, a life member of the Iowa State Medical Society, was honored May 2, in recognition of his 50 years of service to his community. A stained glass window in the new Methodist church there was dedicated to him. Now a semi-invalid, Dr. Mott practices at his home across the street from the church.

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Arnold, K. E., Sioux City
(Port Hueneme, Calif.) Lt. (j.g.), U.S.N.R.
Berg, J. W., Ames.....
Bogle, W. C., Marion
(Minneapolis, Minnesota)Lt., U.S.N.R.
Brennan, J. E., Des Moines
(Camp Pendleton, Calif.)Lt., U.S.N.R.
Broman, J. A., Maquoketa
(Ft. Sill, Okla.) Capt., A.U.S.
Cline, H. L., Iowa City
(Denver, Colorado) A.U.S.
Daut, R. V., Davenport
(Westover Field, Massachusetts)Capt., U.S.A.F.
Davidson, M. C., Emmetsburg
(El Paso, Tex.)Col., A.U.S.
Dooley, J. E., Fort Dodge
(Pleasanton, Calif.)Capt., U.S.A.F.
Dunseth, W. R., Kellogg
(APO San Francisco, Calif.)USAF
Eckhardt, R. D., Iowa City
(Portsmouth, Virginia) Lt., U.S.N.R.
Ehmke, Bruce C., Iowa City
(Hot Springs, Arkansas)1st Lt., A.U.S.
Field, C. A., Cresco
(DeRidder, Louisiana)Capt., A.U.S.

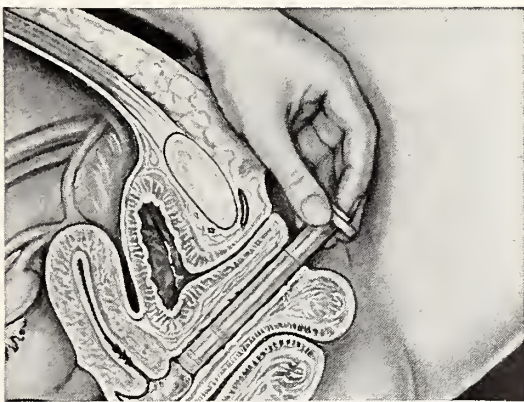
(Continued on page xxx)

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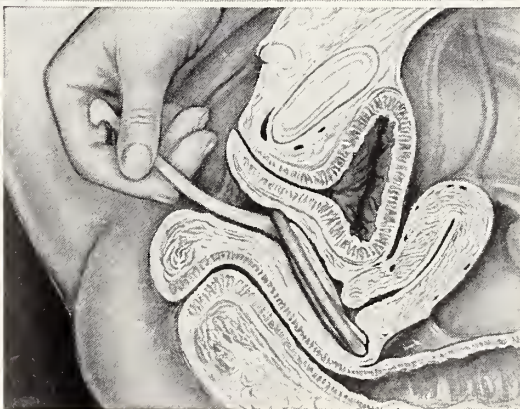
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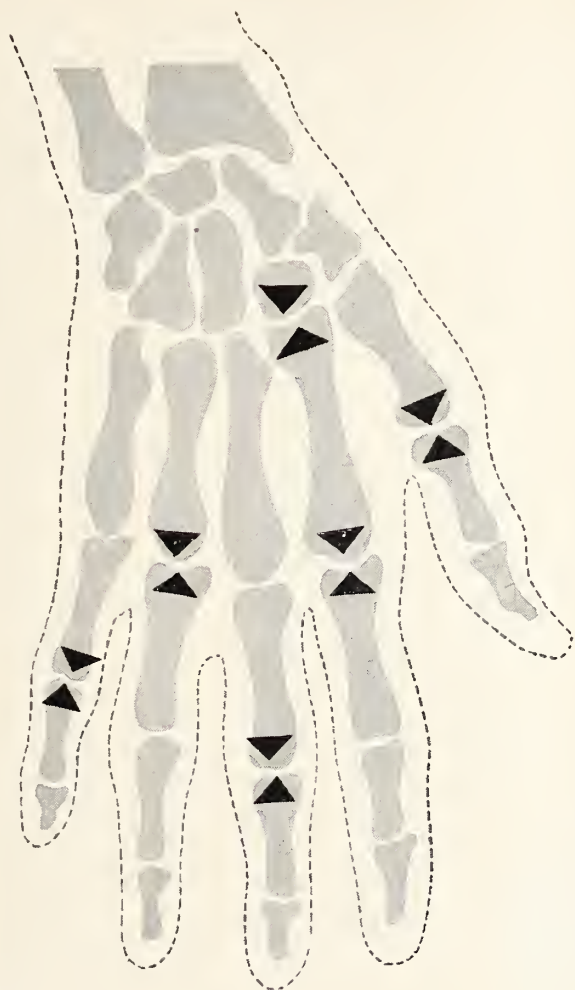
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8

Roster of Iowa Physicians in Military Service

(Continued from page xxviii)

Garred, J. L., Whiting
(San Francisco, Calif.)Lt., U.S.N.R.
Garred, W. P., Dow City
(San Francisco, Calif.)Lt.(j.g.), U.S.N.R.
Giles, Francis E., Cresco
(Fort Bragg, North Carolina)A.U.S.
Godbey, M. E., Mt. Pleasant
(A.P.O. 862, New York City)Capt. U.S.A.F.
Gottsch, John E., Shenandoah
(MacDill A.F.B., Tampa, Florida)Capt. U.S.A.F.
Gottsch, Joseph C., Shenandoah
(Randolph A.F.B., Texas)1st. Lt., U.S.A.F.
Haskell, J. G., Reinbeck
(U.S.A.H., Ft. Riley, Kansas)
Hickman, D. M., Indianola
(Alexandria, Louisiana) 1st Lt., U.S.A.F.
Isham, R. B., OsageU.S.N.R.
Iwen, G. W., Iowa City
Jenkins, H. F., Ogden
(Randolph A.F.B., Texas)U.S.A.F.
Johnson, A. A., Jr., Council Bluffs
(Fort Worth, Texas)Capt., U.S.A.F.
Johnson, M. H., Iowa City
(APO New York, N. Y.)Capt., A.U.S.
Johnson, W. A., Emmetsburg
(Corona, California)Lt., U.S.N.R.
Judiesch, K. J., Iowa City
(Ft. Sam Houston, Tex.)1st Lt., A.U.S.
Kenney, B. E., Woodbine
(Raleigh, North Carolina)1st Lt., U.S.A.F.
Knouf, Clare E., Lake City
(519 SW 3rd Ave., Portland, Ore.)Lt., U.S.N.R.
Koptik, George Jr., Garwin.....
Kruse, R. H., Conrad
(Pearl Harbor, T. H.)Lt., U.S.N.R.
Kuehn, W. G., Clarinda
(A.P.O. San Francisco, Calif.)Lt., U.S.N.R.
Kuehnle, G. R., Dubuque
(Baton Rouge, La.)
Kurth, R. J., Waterloo
(Minneapolis, Minn.)Capt., U.S.A.F.
Larson, Erling, Jr., Des Moines
(Indianapolis, Indiana)Lt., U.S.N.R.
Lawler, Matthew P., Des Moines
(Corona, California)U.S.N.
Lee, R. W., Burlington.....
Leiter, E. R. K., Des Moines
(Bangor, Me.)Capt., U.S.A.F.
Martins, J. K., Waterloo
(Bayonne, N. J.) Lt., U.S.N.R.
Maxwell, J. R., Iowa City
(Camp Stoneman, California)1st. Lt., A.U.S.
Middleton, W. H., Central City
(Bethesda, Maryland)U.S.N.R.
Montgomery, A. E., Jefferson
(Phoenixville, Pa.)Lt. Col., A.U.S.
Nielsen, G. E., Des Moines
(Topeka, Kan.) 1st Lt., U.S.A.F.
Paul, R. E., Des Moines
(FPO San Francisco, Calif.)Lt., U.S.N.R.
Perman, Harvey H., Forest City
(Yokasuka, Japan)U.S.N.
Peterson, L. G., Holstein
(Camp Kilmer, N. J.)A.U.S.
(Continued on page xxxii)



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Roster of Iowa Physicians in Military Service

(Continued from page xxx)

Pfaff, R. A., Dubuque (Camp Pendleton, Calif.) Lt., U.S.N.R.	Thompson, J. W., Ames (Camp Breckinridge, Kentucky) Capt., A.U.S.
Pfeiffer, D. W., McGregor (Ft. Sam Houston, Texas)	..... A.U.S.	Thornton, F. E., Des Moines (Portsmouth, Va.)	..... Lt. Cmdr., U.S.N.R.
Prendergast, L. J., Iowa City (Oceanside, California)	..... U.S.N.R.	Troxel, J. F., Cedar Rapids (APO New York, N. Y.)	..... 1st Lt., A.U.S.
Province, Wm., Jr., Dubuque (Long Beach, Calif.)	..... U.S.N.R.	Uchiyama, J. K., Des Moines (Wichita Falls, Texas)	..... 1st Lt., U.S.A.F.
Puntenney, A. W., Boone (Portsmouth, Va.)	..... Lt., U.S.N.R.	von Lackum, L. S., Oelwein (Great Lakes, Ill.)	..... Lt., U.S.N.R.
Rhode, M. C., Iowa City (Philadelphia, Pa.)	.....	Voorhees, P. H., Ottumwa (Jamaica, N. Y.)	..... U.S.N.R.
Rogers, Edward A., Anamosa (U.S.P.H.S. Hospital, Seattle)	.....	Wall, J. M., Boone (Bryan A.F.B., Texas)	..... 1st Lt., U.S.A.F.
Saunders, R. J., Colfax (APO San Francisco, Calif.)	..... 1st Lt., U.S.A.F.	Walker, J. R., Waterloo (Bethesda, Maryland)	..... Lt., U.S.N.R.
Schlichtemeier, E. O., Peterson (FPO San Francisco, Calif.)	..... Lt., U.S.N.R.	Walston, J. H., Graettinger (Lackland A.F.B., Texas)	..... 1st Lt., U.S.A.F.
Shaffer, F. J., Iowa City	..... Col., U.S.A.F.	Westly, J. S., Mason City (F.P.O., New York City)	..... Lt., U.S.N.R.
Shuldberg, Arthur, Des Moines (Gunter AFB, Ala.)	..... 1st Lt., U.S.A.F.	*Wilkins, D. S., Iowa City (APO San Francisco, Calif.)	..... Capt., A.U.S.
Sinton, D. W., Iowa City (Colorado Springs, Colorado)	..... A.U.S.	Wilson, Robert G., Missouri Valley (San Antonio, Texas)	..... Flight Surgeon
Smith, C. B., Iowa City (Bowling Green, Ky.)	..... Capt., A.U.S.	Witte, H. J., Marathon (San Francisco, Calif.)	..... Lt. Col., A.U.S.
Sphonheimer, L. N., Donnellson (Mountain Home AFB, Idaho)	..... 1st Lt., U.S.A.F.	Young, R. A., Clarion (Ft. Sam Houston, Tex.)	..... Capt., A.U.S.
Stivers, T. W., Des Moines (Hutchinson, Kansas)	..... Lt. (jg) U.S.N.R.	Zeilenga, R. H., Orange City (Madison, Wisc.)	..... 1st Lt., U.S.A.F.
Sugioka, Kenneth, Iowa City (Long Island, N. Y.) A.U.S.	Zoekler, Samuel J., Des Moines (7071 A.U.S. Hospital, Ft. Belvoir, Virginia) Capt., A.U.S.
Theilen, E. O., Iowa City (Washington, D. C.) Capt. A.U.S.		



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The JOURNAL

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Vol. XLIV

DES MOINES, IOWA, JULY, 1954

No. 7

The Management of Non-Tuberculous Lesions of the Chest*

ALVAN L. BARACH, M.D.**

NEW YORK, N. Y.

IN THE TREATMENT of non-tuberculous diseases of the chest, what is now called physiologic therapy is increasing in importance. By physiologic therapy, we understand the attempt to restore respiratory function as nearly as possible to normal. One of the earliest examples of this type of approach was the administration of oxygen. Later, not only were new gases used, but also a variety of pressures were employed. And even more recently, the mechanics of breathing have been taught to the patient. Physiologic therapy is not confined to the administration of oxygen and teaching the patient to breathe, but includes the administration of nebulized aerosols, such as epinephrine for treatment of asthma and the bronchospastic type of pulmonary emphysema, pressure breathing for the treatment of edema of the lungs and negative pressure for assistance in the elimination of bronchial secretions.

Instead of discussing disease entities such as chronic bronchitis, bronchiectasis, asthma and pulmonary emphysema, I propose to consider the treatment of bronchospasm and the elimination of retained secretions in these conditions; in other words, I shall deal with the principles and treatment of these disturbances in physiology which occur frequently in each one of those clinical entities.

Bronchospasm is, as you know, a common characteristic of patients with pulmonary emphysema. It is well known that administration of nebulized

epinephrine through a good nebulizer, such as the vaponephrine nebulizer or the DeVilbiss No. 40, generally provides adequate treatment at the start of the disease. But patients in time become refractory to it. Aminophylline administered by mouth on an empty stomach in a dosage of 3 to 5 grains is an effective bronchodilator, and when mixed with benzocaine, generally prevents nausea†. Aminophylline, an excellent bronchodilator, may often be used for long periods without refractoriness developing. Although at the start the treatment of asthma is simple, later the lack of sensitivity to these drugs presents an imposing problem. Bronchospasm, when it occurs in chronic bronchitis, in asthma or in emphysema, involves the treatment of the refractory state. It is of advantage to anticipate that these patients, after a while, will not respond so well, and it is also advantageous to be aware that there are measures which will restore their sensitivity to bronchodilator medication.

Among the most important steps that can be taken is to stop the use of the bronchodilator drugs which the patient has been using and to substitute something else. We all know that a regimen of ACTH and cortisone works, but it is generally of only temporary value, except in two instances. Those exceptions are pollen asthma, where it is very valuable, and in those patients in whom a moderately well controlled asthma or a bronchospastic pulmonary emphysema case has become worse after a cold. In those cases hydrocortone may be used, since it will produce a remission much more quickly and with smaller dos-

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** From the Department of Medicine, College of Physicians and Surgeons, Columbia University, the Presbyterian Hospital and the Columbia Division, Goldwater Memorial Hospital, New York.

† This compound is available as the Dainite tablet from the Irwin Neisler Company.

age than cortisone. In a variety of other cases, however, we still need something else to substitute for bronchodilator medication. What should we use? Potassium iodide, a long-used remedy, is almost always of some value. The addition of Fowler's solution, in a dosage of 3 drops 4 times a day, for a week or ten days, is frequently capable of ushering in a remission. Sometimes ether anesthesia, or fever therapy with Kirk's typhoid vaccine or pyromen, produces a remission. Ipecac to produce vomiting and elimination of mucus can also be used. What is more important than reviewing the list of remedies is realizing the necessity of trying to terminate the refractory state.

In many instances it is not only bronchospasm that prevents response to aminophylline or vapo-nephri-ne, but the presence of retained secretions in the lungs—secretions of an allergic nature or of the purulent or mucopurulent type. What methods have we to treat this? Postural drainage has been known for a long time. There are other procedures that the patient himself can perform.

When one sees patients with either chronic bronchitis, bronchial asthma, pulmonary emphysema or bronchiectasis, he is faced with the fact that retained secretions from time to time play a large role in evoking the symptoms of the disease. The patient may inhale nebulized epinephrine for the relief of bronchial spasm, but that, in itself, may not be enough.* Manual compression of the thorax is additionally helpful. The patient takes a deep breath, and then, as the breath is being expelled, the physician compresses the patient's lower thorax and abdomen with his hands, thus making the expulsion of air virtually explosive. That abrupt compression results not only in a decreased distention of the lungs, in patients with pulmonary emphysema, but also aids them in the expectoration of mucus. The maneuver is taught to the patient.

EFFECT OF CHANGE OF POSTURE ON PULMONARY VENTILATION AND OXYGEN CONSUMPTION IN A PATIENT WITH PULMONARY EMPHYSEMA

	Pulmonary Ventilation cc. per min.	O ₂ Consumption cc. per min.
Breathing air. Sitting	13,750	304
Breathing air, head down 22° "viscero-diaphragmatic" breathing	11,150	271
Breathing 100 per cent oxygen. Sitting	11,550	291

In a certain number of people, administering nebulized epinephrine by means of a hand bulb is less effective than giving 0.5 cc. of epinephrine,

* Among the broncho-dilator aerosols, 2.25 per cent racemic epinephrine (Vaponefrin) appears to be the most effective in most cases. The isopropyl modification of epinephrine (aleudrine, isuprel 1.0 per cent) is used in refractory cases.

vaponephrine or isuprel, mixed with 2 cc. of normal saline, through a nebulizer attached to a meter mask with a flow of 5 liters of oxygen per minute. It is often of value to let the patient breathe this mixture for about 15 minutes, since the lung does not always open entirely at one time. During a period of 12 to 15 minutes most of the bronchial tubes will have received this bronchodilator and vasoconstrictor solution in dilute form.

In recent years, intermittent-pressure breathing devices have been used by Gordon, Motley and Smart in such a way as to nebulize bronchodilator solutions. It facilitates the expenditure of less effort in breathing, but it has been our experience as well as that of Fowler, Helmholtz and Miller, that in patients treated alternately with the old-fashioned method and with the Bennett or the Mine Safety Appliance apparatus, the results have been for the most part the same. If one takes a deep breath, the diameter of the bronchi is just as large as an equivalent chest volume produced by pressure. The I.P.P.B. apparatus (Halliburton,** Bennett or M.S.A.) are useful for the purpose of relieving asthmatic dyspnea or pulmonary edema, but I should like to point out that its principal achievement in the treatment of pulmonary emphysema is the continuous aerosolization of bronchodilator solutions. For patients of moderate means, this purpose can now be accomplished at home with a pump supplying air for the nebulizing of bronchodilator drugs.† There is one further point that is of considerable importance. One must be sure to instruct the patient to cough after the inhalation. Many individuals are so relieved that they fail to do so, and, unless told to cough deliberately, the mucus has a tendency to remain in their respiratory system and be the cause of dyspnea later.

The physiologic effect of inhaling a bronchodilator solution of 2.25 per cent racemic epinephrine and manual compression of the chest, was measured as follows. When breathing room air before treatment, the pulmonary ventilation was 13,000 cc.; after treatment, 7,900 cc. The relief of dyspnea is shown by the decrease in the minute-volume of breathing. Patients with emphysema manifest a decrease in ventilation with oxygen, which, to my mind, is one of the most important of the functional tests for this disease. The difference between the ventilation with oxygen and air after a patient has coughed up secretions from his lungs was much less, i.e. a difference between 8,500 cc. and 7,400 cc.

** We have found the Halliburton apparatus the most satisfactory of the various devices employed to accomplish intermittent pressure breathing and nebulization of bronchodilator aerosols, and it has the special advantage of providing automatic mechanical ventilation in the patient who is unable to carry on voluntary respiration, either because of respiratory paralysis or a comatose state. Since it is capable of providing 50 per cent oxygen, the cost of oxygen is reduced and the side effects of administering 100 per cent oxygen are avoided.

† The pump can be obtained at the Maihof Engineering Co., Avenel, New Jersey.

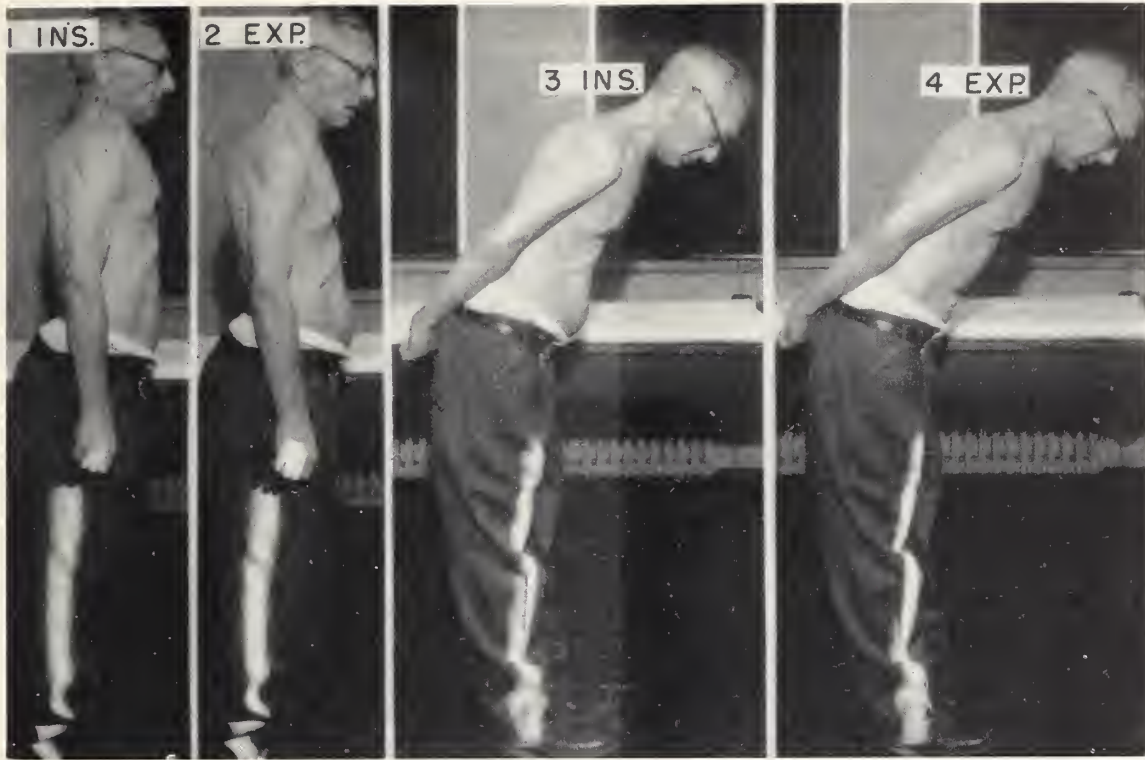


Fig. 1. In the erect posture, diaphragmatic descent is absent on inspiration (1). When patient bends forward, protrusion of his abdomen makes manifest the diaphragmatic contraction on inspiration (3).

In our present program of treatment for patients with pulmonary emphysema and, indeed, those with asthma and bronchiectasis also, we use the head-down position. This does what, in effect, pneumoperitoneum accomplishes. The pressure of the liver, spleen and the abdominal organs pushes the diaphragm headward into the chest. When the patient inspires properly, the diaphragm pushes against those crowding viscera, a phenomenon that is evidenced by a marked protrusion of the abdomen. When the erect patient takes a breath with his rib cage, on the other hand, the diaphragm is often sucked up, rather than pushed down.

Diaphragmatic breathing is of utmost importance in the treatment of practically all patients with the diseases of the chest. If the patient is supine, with his head down, and the physician then places his hands on the patient's abdomen and presses gently against it, instructing the patient to oppose that pressure as he takes a breath, he can very quickly train him to breathe with his diaphragm. In our clinic more than 200 patients suffering from pulmonary emphysema have been trained to use the diaphragm to breathe. Later, they use the diaphragmatic technique sitting and, finally, standing and walking.

With abdominal contraction during expiration, as advocated by Hofbauer, Schutz and Allan, the

diaphragm can be further elevated, but it is not often that this method is used unconsciously.

People who fail to use their diaphragms in breathing have been neglectful or have been subject to psychosomatic influences. Men whose training was in military schools often do not adequately move their diaphragms. I have also had occasion to discover that standing up straight and expanding the chest during inspiration has at times produced what may rank as virtually an occupational disease among moving picture actresses. Heckscher in Denmark believes that the erect position itself may be a cause of emphysema.

Using the diaphragm is an old method of breathing, and, indeed, it appears that people who suffer from pulmonary emphysema have assumed the erect posture prematurely. Had they preserved an inclination to use all four extremities for locomotion they would have continued to lean forward, thus facilitating adequate ventilation of the lower lobes of their lungs, which, indeed, provide the greatest part of the diffusion of oxygen and CO_2 . With the decrease of pulmonary ventilation initiated by the head-down position, there is often an increase in the oxygen saturation of the arterial blood. In some cases of respiratory acidosis, the head-down position can be used to facilitate elimination of CO_2 . One must realize that normally elevation of the diaphragm is the result of negative pressure produced by the contraction of the lungs.

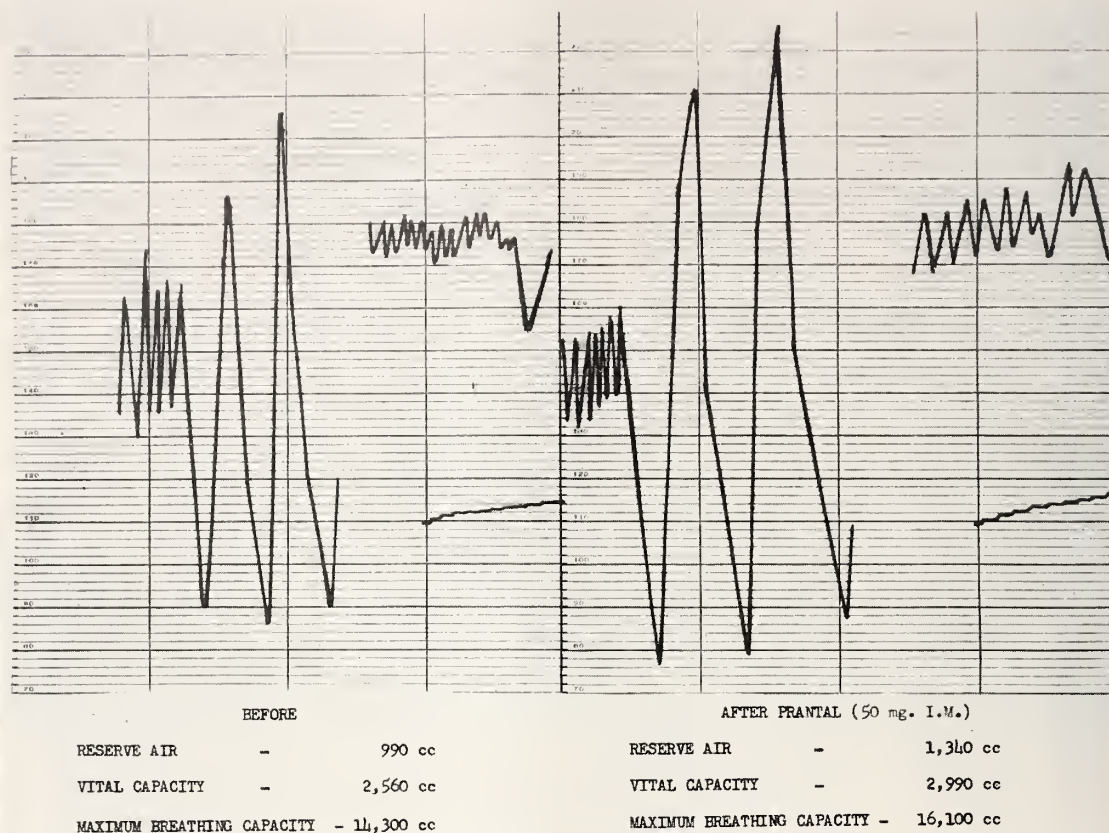


Fig. 2. Bronchospasm relieved by anti-cholinergic drug (Prantal), as revealed by increase in vital capacity and maximal breathing capacity.

In these cases the tension of the lungs is reduced, which in part increases the difficulty of raising the diaphragm; special training is generally necessary to aid the patient in this respect. In the accompanying illustrations (Fig. 2), the physiologic responses to the head-down position, the leaning forward position and administration of a bronchodilator drug are illustrated.

When a man stands upright, he has increased the amount of air in his lungs by about 25 per cent (Lindhard). If a man walks bending forward, he is able to breathe more easily since lung volume is still high, but less downward pressure is exerted on the diaphragm. Although it may not be an esthetic way to walk, it is more desirable for patients with pulmonary emphysema.

I am not convinced that doctors' telling their patients to stop smoking is adequate treatment. I think we have to be cautious about interpreting the results. Bickerman and I have just finished an investigation of the acute effects of tobacco smoking. Individuals who have an allergy to tobacco should not smoke, especially when smoking causes a productive mucoid discharge. However, it is also true that smoking at times has the worthwhile effect of stimulating the coughing up of mucus,

and the resultant increase in vital capacity is at times similar to that produced by the administration of vaponephrine. Since the coughing up of mucus is one of the purposes for which the drug is used, smoking, in many cases, is valuable in that it stimulates coughing.

The expression "cigarette cough" should only be used as a diagnosis when confirmed by the absence of a disease process. If a man says that he has stopped smoking and that his cough has disappeared, we should be hesitant to congratulate him until we are sure that the irritant effect of tobacco smoke is not a trigger mechanism for pulmonary or some other pathology. I saw a woman with a large cavity in the right upper lobe who had stopped smoking at the suggestion of her obstetrician. Her cough had temporarily disappeared, but giving up cigarettes was not the remedy for a tuberculous cavity. A patient who had congestive heart failure was told to stop smoking by his physician and his coughing, in large measure, ceased. The patient was still somewhat short of breath, and his venous pressure was found to be 180. It is quite true that left heart failure with congestion of the lungs is a syndrome in which cigarette smoke may stimulate coughing.

However, when this patient was digitalized and had mercurhydrin, he was able to smoke a pack of cigarettes a day without any cough. I also recall a similar reaction in a man with cancer of the lung. A disease of the lungs may be irritated by smoking, or smoking may provoke a cough in such an individual, but we should not limit our investigation on the grounds that stopping smoking has relieved him of the symptom. Instead, we should be concerned to discover the basic cause of the symptom, if there is one. Granted, some people have a cigarette allergy, but in other people who cough, it is possible that when their disease has been treated they will be able to smoke without coughing. A cough is frequently due to bronchospasm, pulmonary distention and retained mucus. My point, obviously, is not that people must smoke. Rather, it is that we should not be content with ascribing the cough to the smoking unless we have investigated the possibility of another etiology of the cough.

Next, I wish to discuss a recent development in our clinic—something that we are inclined to believe may have a revolutionary effect on the management of diseases of the chest. It is called exsufflation with negative pressure, developed as a result of studies on mechanically induced cough by my colleagues Beck, Bickerman, Smith and me. It consists of a motor blower unit that inflates the lung with a pressure of 30-40 mm. Hg; then the sudden opening of a valve deflates the lung with a negative pressure by which air is delivered away from the lungs at a rate of about 10 liters per second. Mucus is blown from the lungs in this way. Whereas a patient with pulmonary emphysema or asthma very often, during coughing, develops a pressure in the alveoli which is larger than the pressure in the bronchi, with the result that the bronchi close off and no mucus is brought up for expectoration, the machine enables him to eliminate air with a velocity and effectiveness far greater than his own cough.

Experimenting with dogs, Dr. Bickerman has shown that lead bullets and safety pins inserted in the animals' lungs by means of the bronchoscope can be removed by means of E.W.N.P. In some instances six or more exsufflations were necessary, but the machine succeeded in nearly all cases in blowing these foreign bodies from the lungs. Then he inserted bullets along with a mucilaginous substance which prevented the dog from coughing them up. Three days later, when the dog had not coughed up the foreign bodies and had developed a pneumonitis, E.W.N.P. was used. After one hour's treatment, the last bullet had been blown out.

Now one of the important features of the mechanism is that it gets air behind the mucous plug. If negative pressure were applied by itself, nothing would happen. First, a high positive pressure, 20 to 40 mm. Hg, is applied in order to distend the bronchial tree. If that pressure is applied repeat-

edly for 1 to 2 seconds, the alveoli distal to the mucous plug may be aerated.

In our hospital, a polio patient who had contracted pulmonary atelectasis was extremely ill, and indeed, he looked as if he were going to die. But by means of E.W.N.P. exsufflator, large quantities of green, purulent sputum that had collected in his respiratory system were eliminated, and twelve hours later the atelectasis had cleared. He was subsequently treated with polymyxin B, with recovery. Continued use of E.W.N.P. enabled him to be taken out of the tank respirator. If he were to stop using it regularly three times a day, accumulation of secretions would result in progressive impairment of respiratory function, and in all likelihood would necessitate his return to the respirator. We have had a number of such cases, in which the blowing out of an ounce or so of mucus each day by means of E.W.N.P. has meant freedom from the iron lung. These are borderline patients with respiratory difficulties, in whom an inability to cough handicaps ventilatory function. In cases of postoperative pneumonia in whom the use of E.W.N.P. obviates the necessity of the patient's coughing, Dr. Williams has observed that patients have none of the pain of coughing. In patients with lung abscess who haven't coughed up sputum in a week, drainage by E.W.N.P. took place, with subsequent healing of the cavity.

Obviously, there are other means of treatment in cases of chronic pulmonary disease—antibiotic therapy, oxygen inhalation, pneumoperitoneum and other measures. Actually, we are using pneumoperitoneum a great deal less than we used to do, since it is now possible to teach diaphragmatic breathing to many patients with pulmonary emphysema and, when they are fitted with the Gordon-Barach belt, the diaphragm reveals an increased excursion.

When a man stands, the weight of the viscera pulls his diaphragm downward. If he bends forward, the weight is not so much straight downward, but perhaps at an angle of 45°. Thus, this stooping posture has been emphasized to facilitate movement of the diaphragm. But because there are some patients who don't want to walk like gorillas, even if doing so would enable them to breathe more easily, we have to resort to a mechanism to aid them. We have found that a properly fashioned and applied belt is an important adjunct in treatment. One should bear in mind that elevation of the diaphragm is not just for remedying shortness of breath, but also for ventilating the lower part of the lung with air, thus making his cough more effective in the expectoration of mucus, saliva and pus, reducing the chances of further infection and enabling as much of the lung as possible to function normally. Until recently, of the various belts that were available, the one which I found most effective was designed by Dr. Burgess Gordon. He wrote a paper on it in 1936, but I doubt that he realized

at that time just how valuable his belt was. Recently, in cooperation with the Spencer Company, of New Haven, we have designed a belt in which an elastic pressure can be applied and varied at will, depending upon whether the patient has a full abdomen or not.* In a man with a big abdomen, the pressure is upward and backward, and the belt can be tilted to produce the proper degree of elevation of the abdomen. In a man with a small abdomen, the same degree of tilting will produce pain. Thus, in the slender patient, the pressure should, and can, be applied more or less directly backward.

In addition to wearing the belt, the patient must, of course, breathe properly. In fact, breathing exercises are instituted before the belt is prescribed. In the office, the physician should have a two-step arrangement on which the patient walks until he is short of breath. Then, the physician should stand behind him and apply pressure upon his abdomen, either upward and backward, or straight backward. It is helpful if, at the same time, the physician bends him forward a little bit. The patient should immediately experience some relief from breathlessness; if he doesn't, there is no point in getting him a belt. The doctor should get him at some other time and try the procedure once again, or should tell him to try the procedure on himself, using his own hands. Often the sensation of relief from dyspnea is quite marked, and under those circumstances one may apply the belt. Patients almost never are happy to wear the belt, at the start, for they aren't used to it and find it somewhat uncomfortable, but they are willing to do so when they find that it helps their breathing.

Now what happens when the patient either applies the pressure with his hands or wears a belt? Alexander, Gordon, Kerr, Prinzmetal, Banyai and others have studied various effects of increasing abdominal pressure. By the proper application of abdominal pressure, the intrapleural pressure may change from -2 to -5 , instead of from $+2$ to -3 . Since there is nothing wrong with the diaphragm other than disuse, in these patients with chronic pulmonary disease, the application of pressure which opposes the weight of the abdominal organs that are pulling upon the diaphragm facilitates a more efficient ventilation of the bases of the lungs. It also makes possible a more effective cough.

In these patients there is, more often than not, a combination of difficulties. They have problems of infection and bronchospasm, but one of the principal things that we can do for them is to teach them to aid themselves in the mechanics of breathing. The person who has breathed with his costal muscles for years has an atrophic diaphragm, and, at first, it is going to be difficult for him to learn to move the diaphragm adequately.

* The Gordon-Barach belt is available in large, medium and small sizes from the Spencer Company.

It is of value for such patients to put a 12-pound sandbag upon their abdomens, as they lie on their backs, and then to practice diaphragmatic breathing. When they have learned diaphragmatic breathing, their pulmonary ventilation may fall 25 per cent, as Dr. Beck, Dr. Williams and I have found. In so doing, they will have begun helping themselves toward a more lasting recovery of ventilatory function. The weight can then be given to the patient with the instruction to use it for half an hour to one hour, three times a day, so that the diaphragm muscle can be built up. After three or four months of such exercise, the muscle will have been strengthened enough so that the belt will give them maximal benefit. A similar program for patients with poliomyelitis is being studied in our clinic.

Among other things, we hope that E.W.N.P. will be useful particularly in the treatment of chronic respiratory infections. In our hospital, we have had seven fatalities resulting from vigorous broad-spectrum antibiotic therapy in debilitated patients who had poor bronchial drainage. In our enthusiasm to erase the last vestiges of infection, we used to give patients terramycin in large doses, sometimes intravenously, and saw them develop *B. proteus* pneumonia subsequently. Dr. Habiff came to the conclusion that the broad-spectrum antibiotics had been given in too high dosage, and he discovered that in many instances a 250 mg. dosage of terramycin two or three times a day was adequate to control some surgical infections. His findings were based upon a study of about 300 cases. In our previous use of terramycin, we had usually given 2 gm. per day, but, stimulated by him, we ran a series in which 1.0 gm. per day has appeared to be adequate to control respiratory infections due to organisms sensitive to this drug. The idea has been suggested to us that the diarrhea produced by aureomycin and terramycin results from irritative effects on the intestinal mucous membrane, and that the irritation is less apt to take place when these drugs are given with a full glass of milk at each dose. However that may be, it is none the less true that we had been in the habit of overdosing our patients with broad-spectrum antibiotics, and we think that the complications we experienced can be avoided by giving smaller doses of these drugs and emphasizing bronchial drainage. E.W.N.P., we hope, by helping patients to rid themselves of retained mucus and pus, will aid in making drug therapy more effective.

We have used E.W.N.P. on previously inoperable cases of bronchiectasis. When we have such a case, we may take out the worst lobe, and provide the patient with a home model of E.W.N.P. when he leaves the hospital, in the belief that with it he will be able to blow out the stagnant material from the other lobes. The apparatus is new, but in the 200 or more patients on whom it has been used, we have seen no harm from its use.

Certain Common

Urological Problems in Children

DWAYNE E. HOWARD, M.D.

SIoux CITY

IT IS NOT MY intention to discuss all the problems involving the urinary tract in children. Rather I have selected four common conditions the recognition, investigation and treatment of which, will not only make the child feel better but will save him the consequences of serious genito-urinary disease later in life. I wish to limit my discussion to pyuria, hematuria, cryptorchism, and hydrocele. Pyuria and hematuria have been listed repeatedly as two of the cardinal symptoms of urinary tract disease.

An investigation of the genito-urinary tract in a child, which endeavors to establish the exact etiology of the symptom or finding, often requires much gentleness and sympathy. It will certainly include a careful history, physical examination and urinalysis, definitive x-ray examinations and often careful and skillful instrumentation.

PYURIA

Pyuria is the commonest symptom of urinary tract disease.^{1, 17} About 1-2 percent of all illnesses in children are due to infection of the urinary tract.^{5, 6} Seventy-five to ninety percent are in females.^{5, 6}

The following facts regarding pyuria should be emphasized:

1. The degree of the pyuria does not indicate the severity of the disease.¹
2. There may be disease of the urinary tract with a normal urine.¹
3. A systemic disease like diabetes may enhance the pyuria.
4. Recurrent or persistent pyuria requires definitive investigation.

The cause of pyuria may be one of many and thus difficult to locate or simple examination may suffice. The eminent pediatric urologist Merideth Campbell lists some fifty causes in his textbook.^{1, 2} From my own experience, I have found the following to be at fault most often:

1. Cystitis and urethritis
2. Pyelonephritis
3. Congenital hydronephrosis
4. Vesical obstruction due to:
 - (a) Stenosis of urethral meatus (the most common neglected urological condition in children)^{13, 14}
 - (b) Stenosis of perpuce
 - (c) Polyps of posterior urethra
 - (d) Congenital valves of posterior urethra
 - (e) Bladder neck sclerosis or congenital bar

The organism most often encountered in urinary tract infections is some member of the colontyphoid group of gram-negative bacilli, most often *E. coli*. Gram-positive cocci, most frequently *Staphylococcus* and *Streptococcus*, are responsible in only fifteen to twenty percent.^{5, 6} Although personally I have not encountered a significant amount of tuberculosis of the urinary tract in children, Campbell states that one of sixty cases of persistent pyuria is attributable to tuberculosis.² Kirby also emphasizes tuberculosis as a cause of chronic infection of the urinary tract in children.¹¹

My suggested routine for care of a child with pyuria is as follows: As soon as pyuria is found the history and physical examination is reviewed, particular attention being paid to the possibility of congenital abnormalities. In many instances it is necessary to again talk with the child or his parent to obtain omitted details. If this is done and no apparent cause of the pyuria is found, and if this is the first of such illnesses, I am in favor of a trial with medication with no further investigation other than a gram stain of the urinary sediment. This smear may be very helpful in choosing a medication for specific treatment. In a gram stain, about eighty-five percent will show gram-negative organisms for which the sulfa preparations are usually effective. Logan emphasizes the value of the sulfonamides.^{15, 16} Fifteen percent will be gram positive, for which penicillin may be used.⁷ In many instances there will be mixed infections requiring antibiotics with wider range of action, but such treatment, it should be noted, is more expensive. Usually I start treatment with gantrisin, elkosin or thiosulfil, but of course the triple sulfa preparations may be used readily also. I suggest the upper limit of recommended dosages in all cases, whether of chemotherapy or of antibiotics.

It is important to follow all these cases carefully. The child should be examined periodically, even though the mother feels that the child is well and that all symptoms have subsided. A persistent or recurrent pyuria, despite the absence of symptoms, makes complete evaluation and explanation a must.

Urological investigation includes:

1. Intravenous urograms (Excretory urography has proved the greatest boon to the study of urinary-tract disorders since the invention of the cystoscope).⁹

2. Catheterization for residual urine.
3. Cystoscopy including the visualization of the urethra, especially in boys.
4. Retrograde pyelograms, if the intravenous urograms are not completely diagnostic.
5. Segregated urine specimens from each kidney for culture (routine and tuberculosis), sensitivity studies, and renal function tests.
6. Cystogram—a delayed cystogram may reveal ureteral reflux when a single film fails.¹⁸

Such an examination will almost invariably give a clear visual and laboratory description of the causative factor for the pyuria. Only when this has been accomplished can proper treatment be administered.

The treatment of course varies with the etiology. In some instances, surgical correction of the lesion may be possible and must be done before permanent improvement can be expected. In other situations, the treatment may involve the choice of appropriate medication, adequate dosage and administration over long enough period of time. Too often chemotherapy or antibiotics are given only until symptoms are absent, rather than until by laboratory means it has been determined that the etiology has been eradicated. It should be given for four to six days after the urine has been reported "negative." Only by such vigorous attacks on urinary tract infection may the physician expect prolonged improvement or cures.

HEMATURIA

Bloody urine in a child is of extreme importance. It is most apt to mean nephritis, acute urinary-tract infection or tumor, in that order.¹ Campbell, in his text, lists some 36 causes.¹ Many of these also are responsible for pyuria. It is interesting and significant that dark urine may not be due to blood, but be the result of a heavy diet of beets, in which case anthocyanin is the excretory product which is responsible for the dark color.

Higgins offers a classification of hematuria which is all-inclusive.^{12, 19, 20} Most of the following will apply to children.

I. Hematuria in general disease

- A. Acute fevers: tonsillitis, scarlet fever, rheumatic fever and the like.
- B. Chronic infection: endocarditis (renal infarction), malaria.
- C. Blood dyscrasias: purpura, leukemia, hemophilia, polycythemia vera.
- D. Deficiency and dietary disease: scurvy and liver deficiency.
- E. Diseases of unknown etiology: Hodgkin's, hypertension or arteriosclerosis with renal involvement, periarteritis nodosa.
- F. Ailments following medications: sulfonamides, methanamine, salicylates, barbiturates, mandelic acid.

- G. Urethral disorders: infection, stricture, tumor, pathology following instrumentation.

II. Hematuria due to intrinsic disease of the urinary tract

A. Renal

1. Calculi or crystals
2. Nephritis
3. Tumor—capsular, parenchymal, pelvic
4. Infection—acute and chronic including tuberculosis
5. Anomalies—polycystic, horseshoe kidney, nephroptosis
6. Trauma

B. Ureteral

1. Calculi
2. Infection
3. Stricture
4. Tumor

C. Vesical

1. Tumor
2. Infection
3. Calculi or foreign bodies
4. Ulcer
5. Trauma

D. Bladder neck

1. Prostate, including seminal vesicles

III. Hematuria associated extrinsic pathology

A. Acute appendicitis

B. Diverticulitis of the colon

C. Neoplasm of the colon, rectum or pelvic structures

D. Acute or chronic salpingitis

To investigate the cause of hematuria, again a careful examination of the urine is imperative along with physical examination and the securing of the history. The presence of casts, albuminuria and edema almost certainly means nephritis. Intravenous pyelography may be carried out, if desired, but certainly instrumentation of the urinary tract is contraindicated.

Bloody urine associated with urinary tract infection includes a wide variety of conditions and locations. The commonest cause of microscopic hematuria in infants and children, according to Tudor, is some manipulative procedure such as dialating the foreskin or breaking the labial fold.¹² The next commonest cause is pyelonephritis and it is surprisingly common in small girls under the age of 3 years.¹² Tumors that bleed are rare in children. Bandler found only three percent of cases in his series of renal tumors of children.⁴

Locating the site of the bleeding may be easy. A mere inspection in boys may reveal the meatus to be small, ulcerated and with a small crack in the mucosa. A small drop of dried blood may be found adherent over the meatus. It is the simplest of all congenital defects in the male.¹⁴ A simple

meatotomy is the treatment necessary, for only rarely will ointments answer the problem. A small meatus should not be overlooked when an infant is circumcized.¹⁰

With hematuria, one must completely evaluate the urinary tract in the same manner as described for pyuria. Prior to manipulative investigation, certain laboratory work, including complete blood count, prothrombin time, bleeding and clotting times, and platelet counts should be done.

Specific treatment, of course, depends upon the etiologic factor. Congenital anomalies may sometimes be corrected surgically. Blood dyscrasias may or may not be amenable to treatment. Extrinsic pathologic conditions warrant careful therapeutic measures. Infectious lesions usually respond to specific chemotherapy or antibiotic treatment.

CRYPTORCHISM

Complete descent of the testes occurs in 99 percent of males by birth.³ Thus in 1 percent of boy babies, there is some degree of undescend. It is now usually considered that the chorionic hormone is responsible for the migration, and the gubernaculum exerts a passive influence, acting as a guide in its path. The testes may therefore be undescended because of lack of proper hormonal stimulation, because of mechanical arrest in the path of one of them, or because of combination of the two causes. It may be bilateral or unilateral. The testicle may be found in the abdomen, in the inguinal canal, in the upper scrotal area, or in an ectopic position such as in the pubic, femoral or perineal areas.

Opinions as to phases of treatment of cryptorchism vary considerably. It is my impression that bilateral undescended testicles warrant a trial at hormonal therapy. One can surmise that the hormone may have been present in insufficient quantities at the 7-9 month in utero, so that normal descent did not take place. Unilateral cryptorchism offers no significant chance of success of treatment other than by surgery. Large hernias and hydroceles are contraindications for hormonal treatment.^{3, 21} Bilateral undescended testicles should be handled separately.^{3, 21} Some authorities believe surgical correction should be done by the 6th year to be sure that testicular damage does not occur. Dr. Robert Gross,^{3, 23} however, believes that an older child is a better operative undertaking. He is also of the opinion that hormonal treatment does practically no good. Occasionally, he says, the testicle will come down, but probably it would have done so anyway at puberty, under the influence of gonadotropic hormones. He doesn't feel that the hormone is of any use as an adjunct to surgery and that it doesn't enlarge or lengthen the cord structures, as is sometimes thought.

I believe that hormonal treatment should be carried out at an age near puberty—at about nine to twelve years—so that in the event of any

secondary changes it will not be too significant. Hamm and Harrison use 250-500 I.U. of chorionic hormone intramuscularly twice weekly for 8 weeks.^{3, 21} Deming has used Follutin 250 I.U. intramuscularly three times a week for four weeks. Rolnick states that endocrine therapy should be given a six-month trial at an early age, and then if it fails, operation is advised as early as the eighth year.²² It is my impression that 250-500 I.U. twice weekly for 8-12 weeks is an adequate course of treatment and if this fails, then operation is indicated.

Surgical correction of the undescended testicle is necessary in a very high percentage of these cases. The choice of operation depends upon each individual case and the preference of the operator. McDonald has used the vacuum treatment with considerable success.¹⁴

In a small percentage, surgery will be unsuccessful because it is necessary to sacrifice too much of the blood supply in order to gain enough length of cord structures to bring the testicle into the scrotum. If this is a bilateral situation, then an artificial hormonal puberty and maintenance will be required.

HYDROCELE IN CHILDREN

A congenital hydrocele is an accumulation of serous fluid in the distal end of the nonobliterated vaginal process.²² The infantile type is sealed off, does not vary in size and warrants early correction. The true congenital type communicates with the peritoneal cavity and thus may come and go. It may disappear spontaneously, and it has been said that development of lymphatics after birth is responsible for the disappearance. Very often, with the hydrocele in young boys, there is a demonstrable hernia which should always be looked for and corrected in conjunction with the hydrocelectomy. An acquired hydrocele usually has a history of trauma or epididymitis.

The differential diagnosis is usually between hernia and hydrocele, or a combination of the two. Rarely, a tumor of the testicle must be considered. The acute onset of pain and inflammatory changes associated with torsion and epididymitis respectively usually rules it out in the differential diagnosis. Spermatoceles in boys are not seen, since spermatogenesis has not yet taken place.¹ A history of injury is usually present if a diagnosis of hematocele is to be considered in a child.²²

Except in the acquired type, the diagnosis of hydrocele in a child is made on the history, since birth, of an enlarged scrotum, which may or may not vary in size. It transilluminates readily and may or may not have an impulse, depending on an associated hernia. If aspirated, the exudate is straw colored, has a specific gravity of 1.020 to 1.026, and contains primarily albumin, some globulin and fibrinogen, a few leukocytes, endothelial cells, cholesterol and fat droplets.²²

The treatment includes aspiration, where one is sure there is no associated hernia, and in children a fair percentage of cures are encountered. Aspiration and injection of some sclerosing solution into the sac are not recommended. Surgical treatment is usually the choice, and consists of either eversion or almost complete removal of the sac. The proper time for surgery in children has been debated. Campbell says if the hydrocele remains tense and shows no sign of disappearing in one month, then operation should be performed without delay.¹ If there is a hernia associated, then surgery can be performed at any time after the first year. If the cystic mass is enlarging, it should be corrected promptly. Operation may be delayed in those cases where there is a small, soft, fluctuant mass. These may disappear spontaneously, but if still present at puberty, I feel that they should be corrected. Surgical treatment enjoys a high percentage of success, but recurrences do take place.

CONCLUSION

It is exceedingly important to do a complete investigation as to causes for pyuria and hematuria in children. These have been discussed. In addition, the subjects of undescended testicles and hydroceles in children have been briefly presented.

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MEDICAL HISTORY OF POLK COUNTY

Just off the press is a HISTORY OF MEDICINE OF POLK COUNTY, IOWA, authored by Walter L. Biering, chairman of the county society's historical committee. The text—144 pages, bound in blue cloth—includes an index of physicians, hospitals, medical associations and journals. It begins with the establishment of the first white settlement in October, 1845, and records, year by year, the achievements of outstanding physicians since 1901.

A limited number of copies have been printed, and the price is \$4.00.

Deafness in Children Investigated

"A look through the older literature on the etiology of deafness makes it obvious that a great deal has been learned in the last few years concerning loss of hearing in young children," Drs. F. P. Fowler and Milos Basek, of Columbia-Presbyterian Medical Center, New York City, declare in the current issue of the ARCHIVES OF OTOLARYNGOLOGY. The old catch-all category "congenital deafness," they assert, must be cast away, and septic meningitis and scarlet fever must no longer be regarded as the most frequent causes of acquiring hearing difficulty.

In a study of 270 deaf children under the age of 10, in all but two of whom deafness began before the child was five years old, they found that 81 had been injured prenatally. Ten of those

cases were attributed to such conditions as hereditary deafness and syphilis; 50 became deaf as the result of German measles, Rh blood factors, emotional causes (excessive vomiting), use of abortives and convulsions during pregnancy; and 21 became deaf as the result of labor difficulties.

Of the 189 in whom deafness was acquired, 45 lost their hearing after inflammation of the middle ear; 39 became deaf following high fever and such infectious diseases as meningitis, mumps and measles; 8 cases were attributable to drugs and poisoning; and 11 developed deafness following such conditions as fractured skull, Ménière's disease, leukemia and cerebral degeneration. In 86 cases, the exact cause of deafness was undetermined.

Leptospira Pomona Infection in Man and Animals in Iowa

RALPH H. HEEREN, M.D., M.P.H.,

ROBERT E. EVANS, Ph.D.,

AND

STANLEY L. HENDRICKS, D.V.M., M.P.H.*

The first reported case of *L. pomona* infection in Iowa was described by Larson¹ in 1953. Inasmuch as he excellently reviewed the literature on the subject, it will be omitted here. This paper reports an additional case, briefly discusses a blood-test survey for leptospirosis among Iowa veterinarians, reports the results of leptospirosis tests on a group of residents in an Iowa Mental Institute and summarizes the epidemiology of the disease as it has occurred in Iowa. Since it is recognized² that man is infected with *Leptospira* by contact with infected animals or their excreta, a discussion of the disease in animals is presented first.

Although leptospirosis due to *L. pomona* has been known to exist in farm animals in this country for about a decade,³ Bennett⁴ of the Iowa Veterinary Medical Diagnostic Laboratory reports that it was first recognized in Iowa cattle in 1951 and in Iowa hogs the following year. As determined by serologic tests, it has occurred in farm animals in most of the counties in Iowa since then. During the period August 1, 1952, to July 31, 1953, the infection was reported in hogs only in 16 counties, in cattle only in 23 counties and in both species in 22 counties (Map I). In addition there was one serologically positive horse each from Audubon, Madison, and Johnson counties. The infection may have been present in other counties during this period, for the reports represent only those suspected cases that were confirmed by serologic tests at the Iowa Veterinary Medical Diagnostic Laboratory.

The clinical picture of leptospirosis in cattle may vary greatly from case to case. It may be a severe, fulminating hemolytic infection causing death within 24 hours of onset, or it may be so mild that it is clinically inapparent. Most cases are between these two extremes. Reinhard³ has listed fever, anorexia, depression, diarrhea, anemia, icterus, hemoglobinuria, hemoglobinemia, oligogalactia, agalactia, weight loss and abortion as the principal clinical manifestations of bovine leptospirosis. Since many of these same manifestations may be due to other etiologic agents, a clinical

diagnosis of leptospirosis usually is difficult or impossible without laboratory tests.

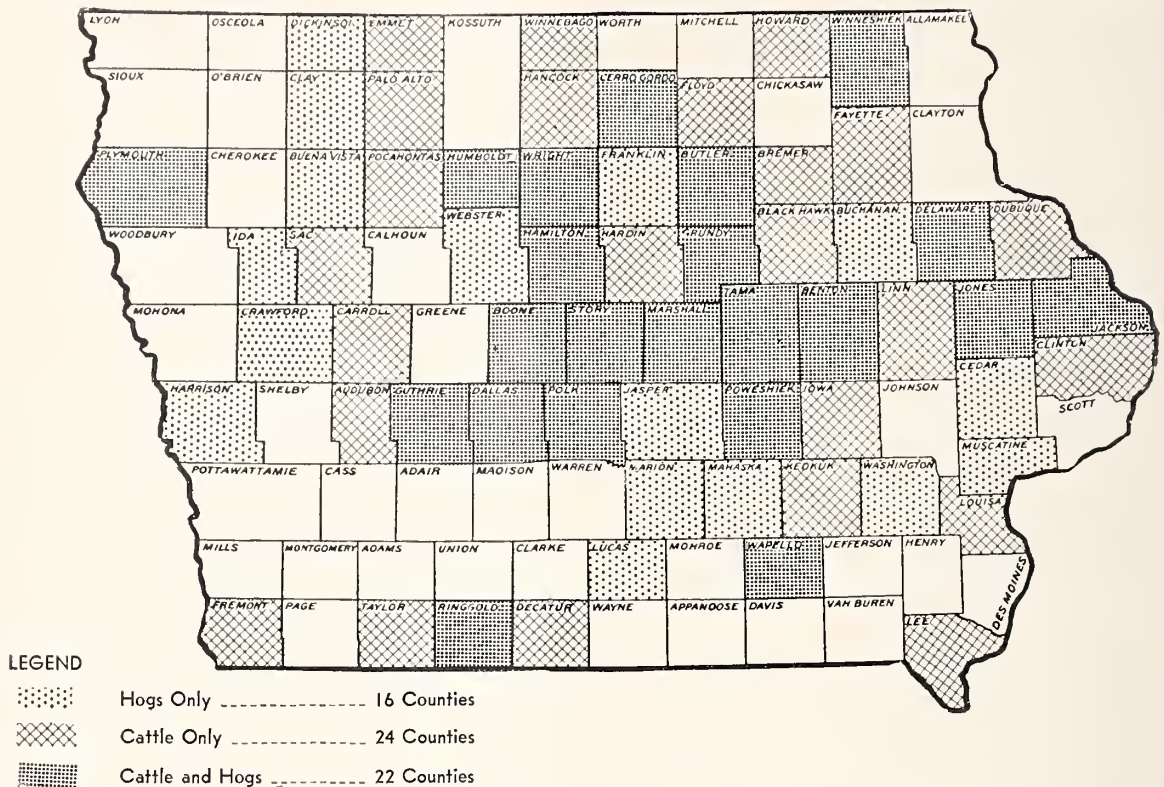
While there is evidence that the disease in hogs also varies in severity, its clinical manifestations remain to be clearly delineated.³ *L. pomona* has been isolated from the urine of a hog sick with hog cholera.⁵ Serologic evidence indicated that subclinical leptospiral infection existed among other hogs on the same farm. In Illinois⁶ the organism has been isolated from aborted swine fetuses from a herd that had been found negative to the *Brucella* agglutination test. Sippel and Atwood⁷ state that in this country the abortion-icterus-anemia syndrome is most common, whereas in Europe symptoms referable to the central nervous system predominate. Gsell⁸ mentions that *L. pomona* infection in pigs usually does not produce a characteristic illness.

L. pomona has been isolated from horses that showed manifestations of acute septicemic disease.⁹ Yager *et al.*¹⁰ and Bohl and Ferguson¹¹ report antibody titers for *L. pomona* among horses and observe that the incidence of such titers is higher among horses with recurrent iridocyclitis. Yager¹² reports the isolation of *L. pomona* from the fluid of the anterior chamber of the eye of a horse one year subsequent to experimental intramuscular inoculation with the organism. It is his belief that recurrent iridocyclitis in horses is caused by *Leptospira*. Johnson¹³ states that two of the Iowa horse serum specimens with positive titers for *L. pomona* mentioned above were from animals that showed clinical manifestations of recurrent iridocyclitis (periodic ophthalmia).

Knowledge regarding the epizootiology of *L. pomona* infection is incomplete. The disease occurs in both sexes.³ In Iowa, animal cases have been reported every month of the year.⁴ It has been observed that morbidity and mortality in mature cattle are lower than in young animals.^{14, 15} The organism localizes in the tubules of the kidney, where it may remain and multiply for many months.¹⁵ Such renal carriers shedding the organism afford ample opportunity to contaminate the environment of other animals and man. Gochenour and Yager¹⁵ state that the carrier condition may develop subsequent to either a clinical or subclinical infection. Reinhard³ states that *Lepto-*

* Director, Division of Preventable Diseases and Deputy Commissioner, Iowa State Department of Health, Assistant Director, State Hygienic Laboratory, and Public Health Veterinarian, Iowa State Department of Health, respectively.

MAP I

LEPTOSPIRA POMONA INFECTION IN CATTLE AND HOGS IN IOWA AS DETERMINED BY SEROLOGIC TESTS¹

Species and geographical distribution of positive blood specimens August 1, 1952-July 31, 1953

spira can persist for several weeks in natural waters in warm seasons. Although the most common avenue of infection is not known, the respiratory, oral and pharyngeal mucosa, the conjunctiva, and skin wounds or lesions have been listed as likely portals of entry.³

Bohl and Ferguson¹¹ suggest the probability of spread from cattle to hogs, or vice versa, based on positive serological findings in both species from three farms on which the cattle and swine were in close contact. Gochenour *et al.*⁵ reported serologically positive cattle and hogs on the same farm. In this instance the two species of animals were not in contact, but the cattle pasture drained into the hog lot.

HUMAN CASE REPORT

The following account of a human illness thought to be due to *L. pomona* infection was made available through the kind cooperation of the attending physician, Thomas E. Brobyn, M.D., Grinnell, Iowa. The patient was a veterinarian, aged 37, engaged in general veterinary medical practice in central Iowa. He suddenly became ill August 26, 1952, with extreme weakness and fever as the principal manifestations. He was hospitalized the following day with a temperature of 104°F. His chief complaints were weakness,

muscular aches and pains, severe headaches, and painful testes. He returned home September 1, stayed in bed three or four days and still had severe headaches. He resumed practice in a few days, but felt weak and became fatigued easily for several weeks. When interviewed one year subsequent to his illness, he stated he still tired more easily than he did prior to the illness. On November 5, 1952, a specimen of his blood was submitted to Dr. Karl Reinhard, U.S.P.H.S. Rocky Mountain Laboratory through Dr. Paul Bennett, Iowa Veterinary Diagnostic Laboratory, for agglutination-lysis test. Dr. Reinhard reported a positive reaction for *L. pomona* antibodies in a dilution of 1:10,000. A second specimen drawn January 20, 1953, (identified as No. 8 in Table No. 1) and tested by Dr. Martha Ward, U.S.P.H.S. Communicable Disease Center Bacteriological Laboratories at Chamblee, Georgia, gave a positive reaction with *L. pomona* antigen in a dilution of 1:512. A third blood specimen, collected in November, 1953, and tested by Dr. Reinhard, gave a positive titer of 1:100 for *L. pomona*. While the patient had had no known contact with proved cases of animal leptospirosis prior to his illness, he had collected blood samples from a herd of cows for a brucellosis test about ten days before the onset of his illness. One of the cows was off

feed and secreting bloody milk. Prior to the illness, the patient had treated several other herds of cattle that were suspected of being infected with leptospirosis, but serology had not been done. Subsequent to his illness, clinically suspected cases of leptospirosis in both cattle and hogs in the area have been confirmed by positive agglutination-lysis tests.

BLOOD TEST SURVEY AMONG VETERINARIANS

In an effort to learn more about the human health significance of *Leptospira pomona* in Iowa, a survey was conducted among veterinarians. Blood samples were drawn from 148 veterinarians in attendance at the annual meeting of the Iowa Veterinary Medical Association in Des Moines in January, 1953. Three specimens were broken in transit and five were unsatisfactory for examination. The remaining 140 specimens represented 75 Iowa counties and 7 neighboring states. The agglutination-lysis test for leptospiral antibodies was applied to these specimens by Dr. Martha Ward. All sera were tested against *L. ictero*, *L. canicola*, *L. pomona*, *L. grippotyphosa*, *L. sejroe*, *L. bataviae*, *L. pyrogenes*, and *L. ballum* antigens. In addition some of the specimens were also tested against *L. hebdomidis* and *L. autumnalis* antigens. (Complete results of the survey are being reported elsewhere.)

Of these 140 specimens, 23 gave some degree of reaction to *L. pomona* antigen. The results showing the titers for each *Leptospira* species of these 23 specimens (all Iowa veterinarians) are given in Table I.¹⁶ It will be noted from this table that all of these specimens also reacted with *L. canicola* antigen and that the *canicola* titer was as high or higher than the *pomona* titer on all specimens except No. 8 and No. 67. Specimen No. 8

is from the veterinarian whose illness with leptospirosis is reported above. Specimen No. 67 is from a veterinarian, aged 27, who had been in general veterinary medical practice about one and one-half years. He had no knowledge of being infected with *Leptospira*. About three months prior to collection of this blood specimen, he had been mildly ill for a few days. Based upon history, clinical manifestations and rising blood titer for brucella, his illness had been diagnosed as brucellosis. When interviewed a year later, he stated that he had been in good health subsequent to the mild illness. Prior to his illness, he had treated cattle that showed clinical manifestations of leptospirosis and hogs that had been serologically positive and showed clinical signs of the disease.

The rather high titers of these specimens when tested with *L. canicola* antigen are shown in Table I. When considering the significance of these titers, one must keep several factors in mind. Gochenour¹⁷ has stated that there are co-reactions between serotypes and points out that higher titers for *L. canicola* than for *L. icterohemorrhagiae* are frequently encountered in persons infected with *L. icterohemorrhagiae* A serotype. Bohl and Ferguson¹¹ list the dog as the primary and man as the secondary host for *L. canicola*. Although the incidence of leptospirosis among dogs in Iowa is unknown, the report¹⁸ of the Veterinary Hospital Clinic at Iowa State College showing 53 cases for 1952 would indicate that the disease is not uncommon. As is the case with cattle and hogs, many dogs may have subclinical leptospirosis and be renal shedders of *Leptospira*. Since most veterinarians have been in close contact with dogs during their practice, their opportunity for subclinical infection with *L. canicola* is not remote. Since Reinhard³ states that agglutinating anti-

TABLE I

Blood Titers for Various Species of *Leptospira* on Specimens (Veterinarians) that reacted with *L. pomona* Antigen

Specimen No.	<i>L. canicola</i> *	<i>L. pomona</i> *	<i>L. ictero</i> *	Remarks
8	1:32	1:512		Clinical leptospirosis in August, 1953.
9	1:128	1:32		
11	1:128	1:32		Non-febrile illness, backache, pyuria in December, 1952.
18	1:128	1:32		
32	1:128	1:8		
33	1:512	1:32		"Not feeling well" (Chronic).
40	1:128	1:32		
60	1:128	±		Gall bladder disease last two years.
61	1:512	±		"Flu" twice in last two years.
67	1:128	1:512	1:32	
77	1:512	1:32		
80	1:512	1:32		
82	1:128	1:32		
96	1:128	1:32		
99	1:32	±		
107	1:128	1:8		
120	1:128	1:32		
127	1:128	±		Sinusitis.
131	±	±		
132	1:128	±		
135	1:128	1:32		
141	1:512	1:32		
142	1:128	1:8		

* In addition all specimens were tested with *L. grippotyphosa*, *L. sejroe*, *L. bataviae*, *L. pyrogenes*, and *L. ballum* antigens with negative findings. Specimens 120, 127, 131, 132, 135, 141, and 142 were also tested with *L. hebdomidis* and *L. autumnalis* antigens with negative results.

bodies persist in animals for years following infection, titers for *L. canicola* in man could also indicate evidence of past infection. As in most serologic tests, anamnestic reactions must also be considered as a possible factor.

At the time the blood specimens were drawn, each donor was asked if he had experienced any febrile illness in the preceding two years. The comments in answer to this question are shown under "remarks" in Table I. Only one, No. 8, gave a history of being ill with leptospirosis.

For diagnostic purposes, the desirability of testing paired blood specimens is well recognized. That is, in order to demonstrate a rising titer, one specimen taken early in the course of the disease and another taken two or three weeks later are necessary. In some cases a third specimen is necessary to demonstrate a rising titer. When only one specimen is tested, as was the case in this survey, it is Dr. Ward's belief that titers of 1:32 are of questionable significance, but that titers of 1:128 or above are definitely indicative of past experience with leptospirosis.¹⁶

Map II, showing the counties of residence of the veterinarians whose leptospirosis tests are reported in Table I, indicates that no particular geographical area in the state is more involved than other areas are.

TESTS AT AN IOWA MENTAL HOSPITAL

In association with an extensive laboratory testing program during an amebiasis control project at an Iowa mental institution, blood specimens from 20 selected residents were tested for leptospirosis. This group of specimens also was tested by Dr. Ward. The results are shown in Table II. Of the 20 specimens tested, 8 reacted with *L. canicola* and *L. pomona* antigens but did not react with other leptospira antigens. One specimen (P.S.) reacted slightly with only *L. pomona*. The remaining 11 specimens were negative to all the leptospira antigens used.

DISCUSSION

The occurrence of a newly recognized disease in animals and man in Iowa emphasizes the editorial comment of the AMERICAN JOURNAL OF PUB-

LIC HEALTH¹⁹ which states: "With the notable reductions which have taken place in many diseases spread from man to man, the relative importance of certain infections which may be spread from animals to man becomes greater." With the livestock population on Iowa farms counted in the millions, the potential reservoir for zoonoses (diseases transmitted between animals and man) is very large. The raising, marketing, and processing of such a large number of animals results in repeated and close contacts of man with the animals and with the environment of the animals. If the animals are infected with or are carriers of human pathogens, cases of illness among the human population are likely to develop. Gsell⁸ observed a higher incidence of *L. pomona* human infections in areas that had large swine herds than in areas with small swine herds. Spink,²⁰ who described the first human case of *L. pomona* infection in Minnesota, states that leptospirosis should be suspected among persons with an acute febrile disease associated with lymphocytic meningitis and especially among those having contact with cattle or swine. It should be differentiated from Q-fever, brucellosis, and infectious mononucleosis. Spink further states that serologic tests for *L. pomona* agglutinins are indicated on sera of human patients with iridocyclitis, inasmuch as this condition is occasionally a late complication of *L. pomona* infection.

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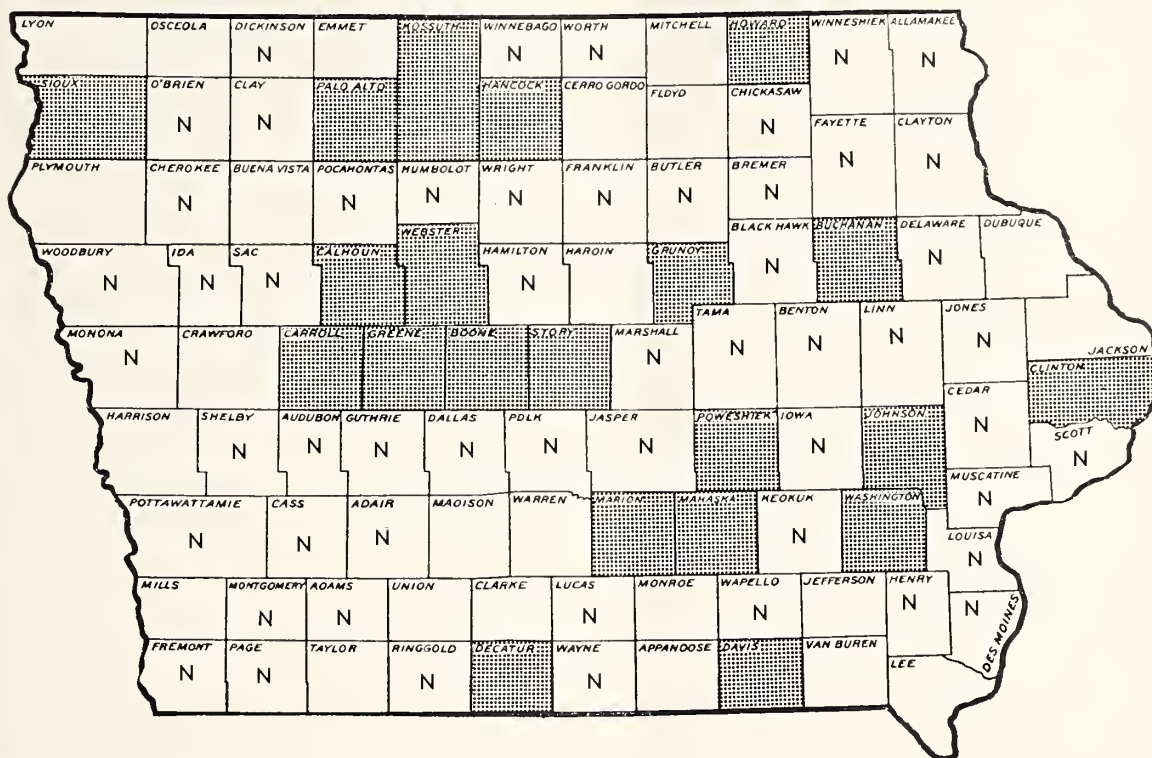
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TABLE II

Results of Positive Agglutination-lysis Tests for Leptospirosis on Blood Specimens from Residents of an Iowa Mental Institution

Specimen	<i>L. canicola</i>	Titers	<i>L. pomona</i>	Remarks
KC	1:512		±	All specimens were also tested with <i>L. ictero.</i> <i>L. grippotyphosa</i> , <i>L. sejroe</i> , <i>L. bataviae</i> , <i>L. pyrogenes</i> , <i>L. ballum</i> , <i>L. hebdomidis</i> , and <i>L. autumnalis</i> antigens with negative findings.
PS	—		±	
LB	1:1024		1:128	
CW	1:2048		1:64	
ST	1:128		±	
EP	1:512		±	
IC	1:512		±	
WC	1:2048		±	
JB	1:64		1:64	

MAP II
GEOGRAPHICAL DISTRIBUTION OF IOWA VETERINARIANS TESTED FOR LEPTOSPIRAL AGGLUTININS



Shaded areas indicate counties having one or more veterinarians whose blood reacted with *L. pomona* antigen. The letter N in a county indicates one or more veterinarians tested for *L. pomona* with negative results.

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POLIO PRECAUTIONS PAMPHLET

During the latter part of May, a folder entitled "Polio Pointers for Parents—1954" was distributed throughout the majority of the schools of the

country. Exceptions were schools where vaccine trials took place, since comparable information was supplied at that time to parents of the children who took part.

The folder is now available to physicians, hospitals and others for use during the polio epidemic season. A companion poster, illustrating precautions and giving brief statements on vaccine and gamma globulin, also may be ordered. Address: The National Foundation for Infantile Paralysis, 120 Broadway, New York City 5.

TRACHEOTOMY TUBE MARKETING

The tracheotomy tube developed at the Raymond Blank Memorial Hospital, in Des Moines, by Dr. J. A. Downing and his associates has been put on the market by the Pilling Company, surgical instrument manufacturers, of Philadelphia.

The device, described in the October, 1950, *JOURNAL OF THE IOWA STATE MEDICAL SOCIETY**, is useful in treating patients who suffer from bulbar poliomyelitis, from tetanus with laryngo-spasm, from drowned lungs, and from head and chest injuries where a positive O₂ closed system must be maintained.

* 40:479-81.

Diagnosis and Treatment of Masses and Tumors in the Neck

ROBERT C. HICKEY, M.D.*

IOWA CITY

THE CLINICAL MANAGEMENT of masses and tumors of the neck does not fall within the scope of any single medical discipline. The variety and diversity of the problems demand multiple skills for the well being of the patient. Derangements attributable to embryological maldevelopment, infection, trauma and neoplasia may occur—and may occur throughout life, with no age being immune. The maldevelopments are at times quite striking, and at times perplexing diagnostically; the infections are highly variable; trauma may present a problem; and if the term *neoplasia* is used loosely, the tumors may tax the endocrinologist or an entire tumor-clinic group. Any discussion of neck masses is inadequate without some consideration of adjacent anatomical areas, but in this discussion no consideration is to be given to diseases of the central nervous system.

DIAGNOSIS

A well-elicited history is essential in the evaluation of a tumor or mass in the neck. In the history, the embryological and normal anatomy must be considered, as well as the age, habits, occupation and sex of the patient. The manner and time of discovery, coupled with subsequent behavior, will often differentiate a congenital abnormality, an infection and a neoplasm.

A well-executed and well-interpreted complete physical examination is necessary. As with any other anatomical areas, thoroughness is essential. The local examination must be complemented by indirect mirror examinations, routine radiographs and laboratory procedures; and it should be supplemented by endoscopy, antral punctures, radiographic laminography, special laboratory studies and other indicated procedures.

Microscopic verification of the disease will be necessary on many, many occasions. The biopsy is best done by the individual or group prepared to complete the therapy. An injudicious open biopsy may interfere subsequently with skin incisions, may cross lymphatics or may cause seeding of cancer cells. At the University Hospitals, aspiration biopsy (Fig. 1) is frequently done. The aspirated material is sandwiched in Gelfoam,[®] and with the aspirated tissue embedded thus, excellent paraffin sections are obtained. For effective results, however, the cooperation between surgeon and pathol-

ogist must be of a high order. At times, an open biopsy of a neck mass will need to be done, particularly in lymphomas or infections. But an open biopsy for confirmation at the time of a large therapeutic procedure such as neck dissection is to be condemned most emphatically because of the likelihood of seeding cancer cells in the wound.

CONGENITAL MASSES AND TUMORS

The neck structures are derived from the so-called three germ layers, and the intricate embryological development, with infoldings and tissue migrations, allows for diverse malformations which may present as fistulas, cysts or masses. Usually the congenital malformations are noted in childhood, although on rare occasions older individuals may exhibit them. The congenital lesions most likely to be encountered are thyroglossal cyst and fistula, branchiogenic cyst and fistula, lymphangioma (cystic hygroma colli); and, more rarely, dermoid inclusions, and functioning (but misplaced) rests, such as lingual thyroid, and branchiogenic carcinoma.

The thyroglossal anomalies spring from the migratory path of the thyroid in its embryological passage from the foramen cecum at the base of the tongue to its position over the upper tracheal rings. The tract usually obliterates, but if remnants remain as a cyst or a fistula, they are near-midline, and the cyst is usually not infected unless opened. Treatment is by excision through



Figure 1. The equipment necessary for an aspiration biopsy is shown. The skin is infiltrated with procaine, the skin incised and the needle with stylet is introduced into the tumor. The aspirated material is placed in Gelfoam and processed in the pathology laboratory.

* From the Department of Surgery, College of Medicine, State University of Iowa.



Figure 2. Ureteral catheter in a branchiogenic fistula. A radiograph showed an intra-oral communication at the faucial tonsil when iodized material was introduced. The dissection was between the external and internal carotid arteries.

transverse incision. Dissection of the tract is carried cephalad to the base of the tongue and into the mouth, a mid-segment of hyoid bone is removed, and the bone reapproximated. Repeated stepladder transverse incisions may aid in the tract dissection. A longitudinal incision is not used, for such an incision produces an unsightly rigid scar.

One must be judicious in excising the rare lingual thyroid, for it may be the only source of endogenous thyroxin. First, the inferior portion of the neck should be explored, or radioactive-iodine tracer studies done. The usual substernal thyroid results from the growth of a thyroid adenoma through the thoracic cage inlet and is not an anomaly.

The branchiogenic fistulae and cysts are most frequent, apparently from the second branchial pouch. The branchiogenic anomalies are laterally situated. The cyst presents generally medial to the upper border of the sternocleidomastoid muscle, and the fistula presents lower in the neck (Fig. 2). Therapy of the fistula is by dissection, carried cephalad by a series of transverse incisions and followed to the tonsillar area between the external and internal carotid arteries. The cysts are excised, and a communication intraorally may not be found. A first branchial pouch fistula may present anterior to the ear, and a third branchial pouch fistula may present low in the antero-lateral neck. Both may have intra-oral communications.

Cystic hygroma colli is encountered most frequently in infants. This is a benign multilocular



Figure 3. Infant, 8 weeks old, with cystic hygroma colli. Child was operated upon under urgent conditions, and modified radical neck dissection done.

cystic anomaly which is the result of an embryologic abnormality of the lymphatic channels. The failure of orderly development of the lymphatic system results in the endothelial lined tumor. The mass may enlarge slowly or swiftly, and may extend from the face to the thorax or may be relatively localized. It may distort normal structures extensively, infiltrate muscle, and surround major vessels and nerves (Fig. 3). The choice of therapy is surgical excision. The dissection of this lymphatic tumor may constitute a major undertaking. For those cysts which cannot be removed, puncture and injection with 25 percent dextrose solution should be done to induce scarring. Results of X-radiation are equivocal, at best, unless large doses are used, and in the child they may be injudicious.

Brief consideration should be given to branchiogenic carcinoma. This must be a biologically proved diagnosis; that is, all too often a branchiogenic carcinoma is a metastasis from an undisclosed primary. In Fig. 4, a 68-year-old patient is shown with a large cervical mass of proved epidermoid carcinoma. The primary in the hypopharynx was not discovered until three months later, in spite of effortful searches. To establish the diagnosis of a branchiogenic carcinoma, a primary tumor, which could have produced a mimicking metastasis, must not be discovered for five years.

CERVICAL LYMPHADENOPATHY

The neck is a frequent site for the secondary manifestation of a disease. A systemic virus in-

fection, such as mumps, has parotitis as the most frequent finding. Rubella may be the cause of posterior cervical lymphadenopathy, and infectious mononucleosis also may cause enlarged cervical nodes.

The lymphatic pathways of the head, upper respiratory and upper alimentary passageways, as well as adjacent cervical structures, drain through the neck nodes. Indeed, communications from subclavicular levels are frequent. Bacterial infections draining to the cervical nodes can cause painful and usually discrete lymphadenopathy. The granulomatous infections such as tuberculosis or actinomycosis, draining to the cervical nodes, often produce matted, firm, enlarged nodes which can be quite resistant to therapy. Cancer metastases lodge in the cervical nodes and are the most frequent cause of painless unilateral or asymmetrical cervical lymphadenopathy.

A knowledge of the lymphatic drainage of the neck helps to determine the source of a primary disease. For example, the initial drainage to the preauricular node is from the temporal portion of the scalp, eyelid and cheek, and drainage to the postauricular node is from the parietal scalp area. The submaxillary nodes drain the floor of

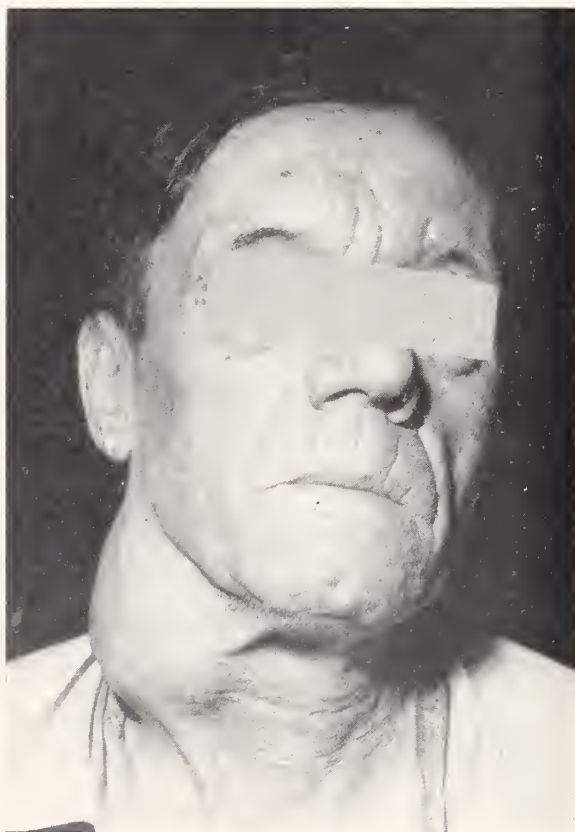


Figure 4. The cervical mass was suspected of being a branchiogenic epidermoid carcinoma, but the primary hypopharyngeal cancer was found three months later.



Figure 5. Seventeen-year-old girl with carcinoma of the thyroid. The lateral cervical metastases are seen.

the mouth, anterior portion of the tongue, lower gingiva and cheek. The submental nodes drain the lower lip and anterior floor of the mouth. Diseases of the tonsil are likely to be reflected in any enlargement of the nodes near the angle of the mandible, and diseases of the tongue cause enlargement of the jugulo-digastric node. These nodes communicate with the deep jugular and spinal accessory chain of nodes, and overlapping does occur. The thyroid and larynx drain to adjacent nodes. In addition, the supraclavicular nodes may receive lymph flow from the axilla, arm, breast, mediastinum and even stomach (Virchow's node).

PRIMARY TUMORS IN THE NECK

Primary ectodermal, endodermal and mesodermal tumors, both benign and malignant, may occur in the neck. Of first consideration are the salivary gland mixed tumors which occur most frequently (85 percent) in the parotid; the estimated occurrence in other individual salivary glands is roughly proportional to the normal size of that gland. Tumors of the parotid should be excised widely. Since most occur in the superficial parotid lobe, a superficial parotid lobectomy is done, with the seventh cranial nerve under direct vision. A simple excision of a parotid mixed tumor without an adequate margin of tissue is poor therapy. The tumor has no definite capsule, and the recurrence rate will be high. Furthermore, mixed tumors are not unequivocally benign. Malignant parotid tumors may be excised with or without a neck dissection and without regard for the seventh cranial nerve. X-radiation may be



Figure 6. A total thyroidectomy and bilateral radical neck dissection was done. The left deep jugular vein was preserved. Therapeutic I 131 was given six weeks later.

used in therapy also, but it is not used as an alternate means to preserve the seventh nerve, for the nerve is destroyed by the tumor. The other salivary gland tumors are treated in a similar manner.

The endodermal tumors are principally those of thyroid and parathyroid origin. The therapy may depend largely on the hormonal activity of these tumors, and insofar as the endocrinological aspect is a complete treatise, hyperthyroidism, hyperparathyroidism or the converse will not be discussed. Solitary thyroid adenomas have attracted attention because of their frequent association with carcinoma. These are well handled by lobectomy, with careful tissue examination at the operating table. Multiple adenomas of the thyroid are less likely to be cancer. Even the malignant thyroid or parathyroid tumor may be endocrinologically active. The ideal therapy for malignant thyroid disease is total thyroidectomy with ipsilateral or bilateral neck dissection as indicated (Fig. 5, 6), followed by therapeutic Iodine 131. Following surgical obliteration of the thyroid and regional metastases, distant or minute metastases are more likely to develop hormonal activity; these cells will be destroyed when utilization of the radioactive iodine is attempted.

It is to be recognized that the therapy for carcinoma of the thyroid depends on the cell type and on the clinical stage of the disease. With an undifferentiated, locally invasive carcinoma, the therapy must be directed toward palliation. Carcinoma of the thyroid also occurs in children. In children, as in adults, the single nodule in the thyroid possesses malignant potentials.

The mesodermal tumors are less frequent, but cavernous angiomas, lipomas, fibromas and their malignant counterparts may appear. As a rule these are treated by appropriate excision.

If the unicentric origin for lymphosarcoma and Hodgkin's disease is accepted, these neoplasms may appear primarily in the neck. The accepted

form of therapy is full, judiciously administered therapeutic X-radiation, rather than surgery alone at this time.

HEAD-AND-NECK CANCER WITH REGIONAL SPREAD

In neoplastic therapy, it is axiomatic that the primary disease and its spread must be controlled to afford the diseased patient an effective opportunity for survival and cure. The rationale for "en bloc" surgical control of a primary tumor and the node-bearing area is exemplified by the treatment of carcinoma of the breast. With the standard radical mastectomy, the afflicted breast, intervening lymphatics and the axillary lymph nodes are removed in continuity. Some head-and-neck cancers are well treated by "en bloc" resection, particularly those which metastasize in a predictable manner, although variations for any given patient or neoplasm must be expected. The impetus for the composite head-and-neck cancer



Figure 7. Combined radical neck dissection and floor-of-mouth resection with partial glossectomy. The mandible was free from disease and preserved. The right side of the divided tongue and floor of mouth are drawn into the neck wound. The radical neck dissection has been finished (Veterans Administration Hospital patient, age 64).



Figure 8. Specimen. Poorly differentiated squamous carcinoma, floor of mouth with metastases to 7 of 27 nodes.

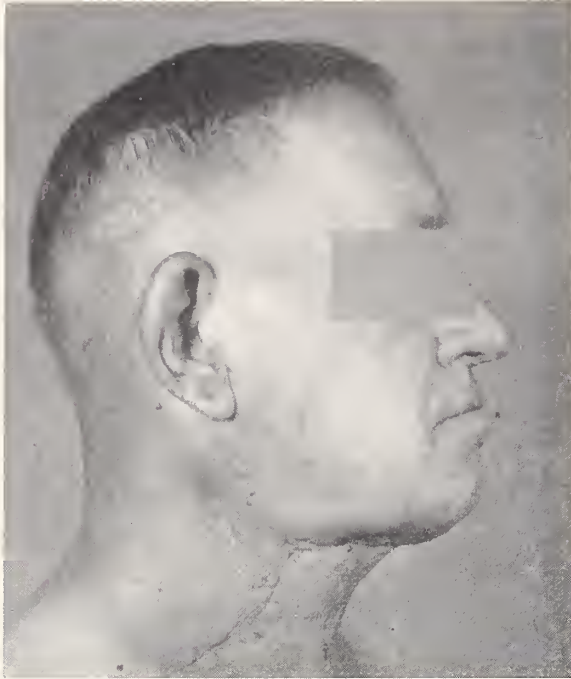


Figure 9. Primary healing of internal and external suture lines, fourteen days after operation.

operations came largely from Ward and from Martin.

Until a decade ago, the therapeutic role of the surgeon in neoplasms of the head and neck rested with extirpational therapy for readily accessible lesions, including intrinsic carcinoma of the larynx, and neck dissection for metastatic carcinoma in nodes. The primary lesions were treated, for the main part, by irradiation. Dissatisfaction with the over-all results of therapy, along with the sequelae of justifiably heavily administered irradiation therapy, led to the undertaking of the composite, or in-continuity operations for head-and-neck can-

cer at a time when improved surgical methods became available through fluid balance, better anesthesia and the control of infection. In no wise is irradiation therapy being condemned, nor has it been entirely replaced. Many lesions respond best to irradiation, but radiosensitivity and radio-curability must not be confused. Then too, good radiation therapy is far better than poor surgery. For some lesions, no satisfactory therapy exists at present.

The fundamental principle in the composite operation is that the primary neoplasm, intervening lymphatics and the lymph-node-bearing areas are removed at one operation. For every operation of this type, mature and individual judgment must be given to planning. *Tumor or drainage pathways must not be transected.* Certain neoplasms of the head and neck lend themselves to the composite operation, such as carcinoma of the larynx with palpable nodal metastases, and carcinoma of the tongue, floor of the mouth, face and lower gingiva. Cancer of the lower lip with palpable metastases and thyroid cancer with regional spread are other examples. (Figs. 5-12). One should know whether the operation is directed toward cure or palliation. If the operation is to give only temporary benefit, an operation of this magnitude is unjustified unless to relieve intractable pain. For some lesions, combinations of modalities using X-radiation, gamma radiation and surgical neck dissection afford the patient the best opportunity for survival.

Patients treated by radical surgery need critical postoperative care. One must direct attention particularly to the airway. *Tracheostomy is mandatory.*

Even though radical resection of cancer tissue is done, the patients tolerate the operation well, and the complication rate is reasonably low. It is to be acknowledged that there is some disfigurement, but in general, the ultimate cosmetic result is satisfactory. At the present time we are directing our efforts toward a more satisfactory



Figure 10. Combined bilateral supraomohyoid neck dissection with lower lip and face resection for epidermoid carcinoma of the face adjacent lip. The dissection has been completed (Veterans Administration Hospital patient, age 38).



Figure 11. Specimen. Squamous carcinoma with no node metastases, although palpable nodes were present pre-operatively

technique for mandibular bony reconstruction. It is imperative at operation, however, that potential cosmetic advantage not be retained at the sacrifice of a good cancer operation. Because most of the operations have been performed since the end of World War II, a significant documentary series of end-results is not available. But at this time the results appear encouraging.

SUMMARY

A general review of masses and tumors in the neck has been undertaken. Head-and-neck cancer surgery has been extended in the past decade by an "en bloc" surgical technique, whereby a primary tumor, intervening lymphatics and node-bearing areas are removed in one operation. The results of such operations are encouraging.

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Figure 12. Primary healing of all suture lines, fourteen days after operation. On the right, the Bernard triangle incision is seen extending from the lip toward the nose. This was used to gain mouth width by advancing the right cheek to form part of the lower lip.

State University of Iowa College of Medicine Clinical Pathologic Conference

March 31, 1954

SUMMARY OF CLINICAL FINDINGS

A 65-YEAR-OLD WIDOW and hat saleslady entered the medical service complaining of coughing blood for four weeks and progressive shortness of breath for two months.

Ten years before admission, she developed swelling of the legs and ankles, also shortness of breath upon exertion, for which she received digitalis and mercurial diuretics intermittently. Five years before admission, she was told that her gallbladder was diseased and that her liver was large and was functioning poorly. She remembered no treatment. One year before admission, she was hospitalized for four months because of swelling of the legs and dyspnea. Two months prior to admission she again was hospitalized, coughing blood without pain, and was told she had pneumonia in the right lung. She believed that her chest had been tapped three times before her transfer to the University Hospitals.

There was no history of rheumatic fever, high

blood pressure, jaundice, or Bright's disease. She had delivered four normal children and had ceased menstruating after an appendectomy at the age of 36. A history of excessive wine consumption was obtained, but later was emphatically denied. Her father had died at the age of 81 of "cancer of the eye" and her mother had died at the age of 94.

Physical examination disclosed a thin, elderly, seriously-ill white woman who was occasionally disoriented. The blood pressure was 120/60 mm. Hg., the pulse was 120 beats per minute, and respirations were 32 per minute. Ophthalmoscopic examination showed moderate arteriosclerotic changes. The trachea was shifted to the right. There were physical signs of fluid in the lower right lung and moist rales throughout the lung fields. Ascites was well-developed, and the liver was palpable 4 cm. below the right costal margin. The spleen was not palpable. Red palms and blue-red nail coloring were noted. Edema of the ankles, legs and sacrum was very marked.

Laboratory examinations at the time of admission and subsequently included urinalysis with specific gravity of 1.005 to 1.010 and a 1-2+ albumin. There were white blood cells in the urine and a positive Myer's test for blood. The hemoglobin was 15.4 grams per 100 ml. The erythrocyte count was 6.5 million per cu. mm., and the leukocyte count was 29,300 per cu. mm. The platelet count was 138,000 per cu. mm. The reticulocyte count was 0.2 per cent. The hemoglobin determination fell to 8.5 gms. during her hospital stay, but the white blood count remained high. Liver function tests included: bromsulfalein 41 per cent retention in 30 minutes; albumin 2.27 grams per 100 ml.; serum and globulin 3.10 grams; zinc sulfate 14 units; cephalin flocculation 2+ in 48 hours. Blood urea nitrogen was 22 mg., and the creatinine was 2.0 mg. per 100 ml. There was no phenosulfonphthalein excreted in the urine in 30 minutes, but there was 18 per cent excreted in two hours.

The bone marrow showed moderate myeloid hyperplasia, and cytologic examination of sputum and pleural fluid revealed no abnormal cells. X-ray examinations included a normal gastrointestinal series and esophagram, and normal skull films. The retrograde pyelograms revealed a congenital hydronephrosis on the right side and a normal-appearing kidney on the left side. Cystoscopy showed hemorrhagic cystitis. The initial chest x-ray disclosed generalized cardiac enlargement with pulmonary congestion and pleural effusion on the right. In the lateral view, there were two fluid levels—one at the right base and one at the level of the third interspace.

Treatment included digoxin, mercurial diuretics, aminophylline, demerol, and nasal oxygen as necessary. She was literally spoon-fed an anorectic diet, stressing a high intake of protein and carbohydrate. Ten days following admission, a thoracotomy revealed thick, creamy pus. About 120 cc. of it was aspirated from the chest; and at that time penicillin, streptomycin, streptokinase, and streptodornase were injected. The following day 700 ml. of pus was aspirated from the chest. Later a closed thoracotomy tube was inserted into the right pleural cavity, but the lung failed to re-expand. Methylene blue placed in the thoracotomy tube was seen in the patient's sputum.

The patient's course in the hospital was improving slightly with the forced diet, 0.25 mg. of digoxin daily, 1 gram of streptomycin, and 400,000 units of penicillin twice daily. She continued afebrile, as she had throughout her hospital course, was rational most of time, sat up in a chair daily, and had no edema or ascites.

On the 30th hospital day, under local anesthesia, a thoracotomy with open drainage was performed. However, following this procedure she began a downhill course with progressive dyspnea and loss of appetite, and died quietly on her 38th hospital day.

CLINICAL DISCUSSION

Dr. Johann L. Ehrenhaft, Thoracic Surgery: Since all of you have the protocol, I shall not read it over completely, but shall attempt to discuss a few of what seemed to me the more important points. This 65-year-old woman gives a good history of cardiac difficulty and heart failure for 10 years prior to her death. She did have shortness of breath and had been treated with mercurial diuretics and digitalis. Her complaints, in the form of hemoptysis, started about two months prior to this hospital admission. It seems to me that this patient had a pulmonary infectious episode starting at that time.

On admission here, the patient was critically ill. Her pulse was 120 per minute. There is no mention in the protocol as to regularity or irregularity of her heart action. The patient's blood pressure was not elevated, and she did not seem to have been a hypertensive or severely arteriosclerotic patient. Examination revealed a large liver, but I believe that the history of prior alcoholic intake can be discounted. Examination of the patient's chest revealed a shift of the trachea to the right, and there were physical signs of fluid in the lower right hemithorax, with moist rales throughout both lung fields. Having an acute infectious episode and having findings in her right hemithorax with mediastinal and tracheal shift toward the side of the involvement, she could have had a neoplasm of the lung with an effusion or an empyema, post-pneumonic or otherwise, and also should have had an atelectasis associated with it, producing the mediastinal shift toward the right. The laboratory findings reported are of interest. The patient had a urine of low specific gravity with albuminuria of 1-2+ and hematuria. The patient's blood hemoglobin at the time of admission was 15.4 grams with a red count of 6.5 million and a white count of 29,300. The platelet and reticulocyte counts were normal. During her hospital stay of 30 days, there was a rapid drop of her blood hemoglobin from the previously mentioned level to 8.5 grams, with a white count remaining persistently at high levels. Obviously, there must have been some blood loss which probably was not hemolytic in type, for the patient had no evidence of jaundice or other indications of a hemolytic type of anemia. The patient's liver-function tests showed some unusual findings. The bromsulfalein test, which normally shows from zero to 10 per cent retention in 30 minutes, showed a 41 per cent retention. There was a lowering of the total blood proteins, with a reversal of the albumin-globulin ratio. The zinc sulfate test, which normally is between 2 and 8 units, showed 15 units. The cephalin flocculation test was not too unusual. The blood urea nitrogen and a creatinine at the time of admission were somewhat elevated, being 22 mgs. and 2.0 mgs. per 100 ml., respectively. The phenosulfonphthalein excretion in the urine in 30 minutes was cer-

tainly abnormal, and an 18 per cent excretion in 2 hours is definitely abnormal. Those findings make me believe that this patient must have had some renal disease which probably was the main contributory factor to her death.

In addition, the patient seemed to have had a congenital hydronephrosis on the right, as demonstrated by retrograde pyelography. Evaluation of the patient's pulmonary status makes one believe that she had an empyema and a bronchopleural fistula, which later, after drainage of the empyema space, was converted into a bronchopleurocutaneous fistula by open drainage.

Prior to this operative procedure, attempts had been made to treat the empyema with streptokinase and dornase, but without notable success. The presence of a bronchopleural fistula prior to the drainage procedure was proved when methylene blue was injected into the pleural space and she coughed it up in her sputum.

In summary then, I believe that the history and the findings during her hospital stay show this patient to have had long-standing cardiac failure. There is definite evidence that she had renal damage, as based upon retrograde pyelography, abnormal urinary findings, and abnormal excretion tests. Her pulmonary status, in my opinion, is on an infectious basis, possibly postpneumonic, with development of an empyema or possibly formation of an empyema following a lung abscess. The possibility of neoplastic disease must be kept in mind, but is not brought out in this protocol. The same pulmonary complications may also arise from long-standing bronchiectasis or possibly from a pulmonary infarct with breakdown. I am unable to explain the rapid lowering of the patient's red blood count over the rather short period of time without massive bleeding, the only evidence of blood loss being a moderate hematuria.

Dr. Raymond F. Sheets, Internal Medicine: Regarding the anemia that this patient developed, I would suspect that she probably was dehydrated when she was admitted and had the count of $6\frac{1}{2}$ million in consequence. There was no evidence on the chart that the anemia was due to blood loss, and I would suspect, Dr. Ehrenhaft, that it probably developed incident to the other diseases, possibly the infection or possibly the kidney disease.

Dr. Ruben H. Flocks, Urology: How often does an empyema occur in patients with pneumonia?

Dr. Sheets: Bronchial pneumonia does occur in congestive heart failure, and empyema would be secondary to the pneumonia, if that's what she had, rather than secondary to congestive failure.

Empyema at the present time is extremely rare in comparison to what it was, say, ten or fifteen years ago. I would like Dr. Ehrenhaft to comment on the decreased incidence of empyema which he has observed and the change in treatment during the last ten years.

Dr. Ehrenhaft: If you had gone through the

surgical wards 15 years ago, you would always have seen many chronic cases of empyema, and many of those patients were with us for a good many weeks each time. In times past, empyemas were treated during the acute stage with aspiration and later on, in the chronic stages, with intermittent irrigation and open drainage. Empyemas were a very common complication of pneumonic episodes in those days, and we saw many post-pneumonic empyemas in children and adults. Nowadays, empyema is a rare disease; and, if we do see it, it is usually modified by antibiotic drugs. The morbidity and mortality rates have dropped precipitously during the antibiotic era.

Dr. Sheets: How long did it take to cure a patient with empyema ten years ago?

Dr. Ehrenhaft: Sometimes many months. It depended on the size of the empyema, the causative organisms, the duration and many other factors. Rib resection and often repeated drainage took many weeks to bring the lung out to the chest wall, or, using the extensive operative procedures at a later stage, to bring the chest wall down to the lung and so to obliterate the empyema space. The treatment today is different. In the acute stage, we aspirate and re-instill antibiotics after we have determined the offending type of organism. If the empyema does not resolve itself, one may try streptokinase or dornase in selected instances. If a chronic empyema develops and the lung becomes captive, open thoracotomy and decortication are usually carried out. Thus the underlying captive lung is freed, the parietal pleural scar tissue is removed, and the lung and the rib cage are rapidly restored to normal.

Dr. Stephen A. Forbes, Radiology: The films of interest for this patient are a series of chest films and a retrograde pyelogram. The films taken of the chest on admission show the left lung field to be clear. The broncho-vascular markings are mildly prominent. The appearance suggests only a mild pulmonary congestion at this time. There is no fluid at the left base. The left costophrenic angle is entirely clear. The heart is enlarged, and the contour suggests left ventricular hypertrophy. The right lung field is largely opaque due to fluid. Fluid lines can be seen in the lower third of the right hemithorax and above the third interspace posteriorly in both the PA and lateral projections, suggesting loculation. Progress examination ten days later shows a right hydropneumothorax following thoracentesis. The heart and mediastinum are not appreciably displaced. Lung markings are somewhat coarsened on the left, but there is no fluid at the left base.

A few days later, a film apparently following further thoracentesis shows almost complete collapse of the right lung. The heart is still not displaced; the mediastinum and trachea are in their normal positions.

A film taken two days later shows a right thoracotomy tube in place, and again demonstrates

fluid at the base of the right hemithorax. A roughly outlined radiolucency in the middle of the collapsed lung suggests cavity formation and is again seen on the film taken 48 hours later. An overexposed film of the chest a few days later, taken with the dorsal spine technique, obliterates all

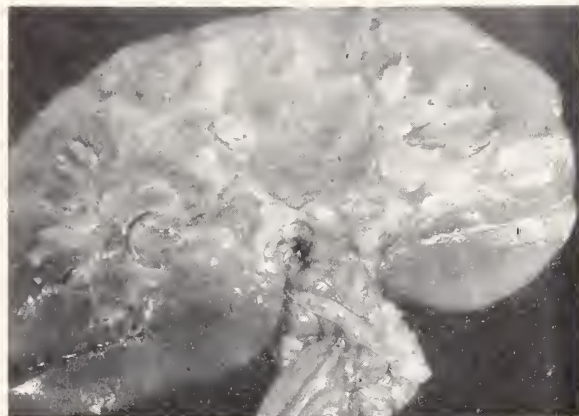


Fig. 1. Acute, necrotizing renal papillitis.

lung tissue except that which is abnormally consolidated, and it seems to show two areas of cavitation within the collapsed lung. These findings all seem to emphasize the probability of an inflammatory process rather than cardiac failure as the main problem, though cardiac enlargement with mild congestion is demonstrated.

The retrograde pyelograms show a normally outlined collecting system on the left side. On the right side, however, the renal pelvis is unusually full, and the abrupt change in outline of the pelvis at the utero-pelvic juncture suggests the constriction produced by an aberrant vessel.

Dr. Flocks: Do you feel that there is any irregular enlargement of the kidney substance on either side? Is there any swelling?

Dr. Forbes: No. No renal enlargement can be seen.

Dr. Flocks: There might be a little. You can't be sure, can you?

Dr. Forbes: No. The films do not demonstrate any enlargement.

Dr. Sheets: Are there any comments or questions? *Dr. Carter.*

Dr. John R. Carter, Pathology: In this case there were a variety of pathologic findings which correlated very well with the clinical observations. The right lung was collapsed, and there were foci of edema. The empyema cavity contained 50 cc. of inspissated pus, from which Hemolytic Staphylococcus aureus was cultured. The pleura was greatly thickened, in places being as much as 1 cm. in thickness. Beneath the pleural surface, the parenchyma was seeded with foci of organizing pneumonitis. Bronchiectasis and lung abscess were not found. At the time of autopsy it was not possible to state whether or not the empyema be-

gan as an infarct. Dense adhesions were present between the parietal pleura and the diaphragm. The left lung was grossly normal. A most conspicuous finding was the bilateral pyelonephritis, with acute necrotizing renal papillitis involving all the renal papillae. The postmortem BUN was 201 mgm. per cent and the creatinine was 8.5 mgm. per cent.

Other findings included a very severe subacute cholangitis involving primarily the portal areas, myocardial hypertrophy (450 grams), dilatation and extensive fibrosis of the heart, generalized arteriosclerosis and generalized atrophy and emaciation. The cause of death was considered to be toxemia secondary to the widespread infection, uremia, and congestive heart failure.

Necrotizing renal papillitis was first described by Friedrich in 1877. Approximately 60 per cent of the patients having renal papillitis are diabetics, and the majority of this group have an associated pyelonephritis also. Of the remaining 40 per cent (non-diabetics), the majority have some evidence of urinary-tract obstruction. Necrotizing papillitis is, in essence, infarction of the renal papillae. The pathologic changes, as might be expected, extend from the area cribosa upward. One of the first significant histologic changes is the degeneration and necrosis of the collecting tubular epithelium. These processes then proceed upward to involve the distal and then the proximal convoluted tubules. Pyelonephritis, both on an inflammatory basis and secondary to the necrotizing process, is a common accompaniment. Since papillitis is basically an ischemic process, the associated edema and inflammatory exudate of the pyelonephritis add further insult, causing pressure upon the vessels and subsequently diminishing the blood flow. The diminution becomes especially severe when there also is obstruction in the lower part of the urinary tract. The lesser circulatory system of the kidney, particularly the vasa rectae vessels, bear the brunt of the pressure. Because these vessels are perpendicular to the direction of the pressure, they become occluded. It is logical to suppose that diabetics are more likely to develop necrotizing renal papillitis, since in diabetics arteriosclerosis is a very common finding and not infrequently is severe. This is particularly true of elderly diabetics. Thus, if superimposed upon the arteriosclerosis, the pressure exerted by the inflammatory exudate logically results in ischemia. Pathogenetically, it is worth re-emphasizing that renal papillitis is basically an ischemic process, the inflammatory reaction being secondary.

Acute renal papillitis can be produced experimentally in a number of different ways. One way is by tying off the ureter, either bilaterally or unilaterally. What one observes experimentally is quite comparable to what one sees in patients. Recently another method has been used. When vinylamine has been injected into animals, the resulting lesions first give the appearance of a lower

nephron nephrosis. This is then followed by ischemia, interestingly enough, of the medullary portion and not the cortical portion of the kidney. This, in turn, results in sufficient ischemia to produce infarction and sloughing.

When renal papillitis does occur, the prognosis is poor, for the ischemia occurs rather suddenly, with concomitant precipitous elevation of the BUN and creatinine. If patients do recover from renal papillitis, or even if only a few of the papillae are involved, not infrequently the renal papillitis produces enough tubular damage to result in death several days later.

Dr. Flocks: Did you find any difference in the incidence of lesions on either side?

Dr. Carter: No. In the present case the renal papillitis was present bilaterally. The cause of the unilateral hydronephrosis was constriction resulting from an accessory renal artery. The prosector did not comment in the autopsy protocol as to whether or not the side that showed the hydronephrosis exhibited the more extensive infarction of the papillae. It is probable, however, that the lesions were somewhat more severe for the reasons that I have mentioned above.

SUMMARY OF NECROPSY FINDINGS

A variety of pathologic changes were found at autopsy. The right lung was collapsed, edematous, and seeded with foci of organizing pneumonitis beneath the pleura. A rather large chronic empyema (right) containing 50 ml. of inspissated pus was found. The pleura was greatly thickened, was scarred, and was the seat of acute and chronic cellulitis. Hemolytic *Staphylococcus aureus* was cultured from the pus. Dense adhesions to parietal pleura and diaphragm were present. The left lung was normal.

A conspicuous finding was the extensive and severe acute necrotizing inflammation of all renal papillae, together with diffuse, bilateral, acute and chronic pyelonephritis and tubular degeneration. The postmortem BUN and creatinine were 201 and 8.5 mgm. per cent respectively.

Other findings included acute cholangitis, myocardial hypertrophy, dilatation and fibrosis, generalized arteriosclerosis, generalized visceral atrophy and emaciation.

The cause of death was toxemia, secondary to widespread infection, uremia, and congestive heart failure.

NECROPSY DIAGNOSES

Chronic empyema, right; hemolytic *Staphylococcus aureus*
Collapse of right lung with pulmonary edema and organizing pleuritis and pneumonitis
Acute and chronic pyelonephritis, bilateral, with acute necrotizing renal papillitis
Uremia
Acute cholangitis

Myocardial hypertrophy, dilatation and fibrosis
Generalized arteriosclerosis

Dr. Sheets: Are there any questions at this time? You may be wondering about the time when the renal papillitis developed. That question can't be answered satisfactorily. The blood urea nitrogen

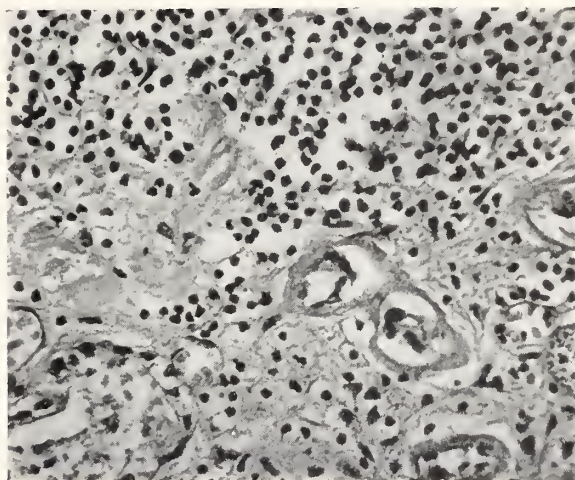


Fig. 2. Acute pyelonephritis.

was normal on admission and normal intravenous pyelograms were made three days later. At the time open drainage of the chest was instituted, there was no hypotension, and there were no episodes of shock at any other time during her hospital stay. The urinary output as recorded on the charts shows no essential change during the last two weeks of her life. Therefore, one has only a vague idea from the clinical story of the time the renal papillitis occurred, and no precipitating episode can be suspected.

Dr. Flocks, would you like to carry on?

Dr. Flocks: There is really very little to add to what has already been said. Dr. Carter has given us a complete description of the phenomenon called "renal papillitis." I knew that she had had renal papillitis when I reviewed the protocol this morning, for I had been informed of the fact. But I was searching for a reason for its development. As far as I could gather, the cardiac situation came first, and the pulmonary situation and sepsis came second. Sepsis was the basic underlying fact of the renal disease.

At the time of admission she already had evidence of fairly severe renal disease. It has been shown by Belt and others that an elevated urea nitrogen and creatinine, as it is used here for the renal function test, means that approximately three-quarters of the renal tissue is not functioning adequately. Usually at about this stage in progressive renal destruction in animals, if you want to check the efficacy of these various renal function tests, the phenosulphonphthalein excretion

gradually gets down to practically zero, and at that stage the blood urea nitrogen and creatinine become elevated. The patient under consideration apparently was just about at that stage when she entered the hospital. There was a good deal of albumin in the urine, and pus cells were present, evidence at that time of renal injury and renal

in the hope that there is enough renal substance to keep the patient going.

RAISED TUITION WOULD BE COLLECTED POST HOC

Solving the problem of deficit financing of the nation's medical schools by "billing" the graduate for his education after he is established in practice is suggested by Dr. Brian Bird in an article in the June issue of THE JOURNAL OF MEDICAL EDUCATION.

Dr. Bird, assistant professor of psychiatry at Western Reserve University School of Medicine, Cleveland, points out that for many years tuition charges have fallen short of equaling the cost of training medical students. Schools have made up the difference by appeals for gifts from alumni, from business firms, from charitable foundations, from individual philanthropists and, reluctantly, from governmental agencies. And, perhaps more importantly, they have kept costs down by failing to keep teachers' salaries proportionate to the rising cost of living.

A way out of this dilemma, according to Dr. Bird, would be to regard the cost of medical education as a legal debt, which the recipient is obligated to repay within a certain number of years after his graduation. The question of how the doctors who go into research and teaching, instead of into private practice, could pay such debts would be answered by the increases in the salaries of such personnel which the scheme would facilitate.

POSTGRADUATE TRAINING IN OTOLARYNGOLOGY

The University of Illinois College of Medicine announces the beginning of a three-year postgraduate course and residency program in otolaryngology at the Research and Educational Hospital, the Illinois Eye and Ear Infirmary and the Hines V-A Hospital. Stipends are \$1,320, \$1,620 and \$1,920 for the three years, respectively, and it is expected that openings will occur throughout the year.

The University of Illinois College of Medicine also announces its Annual Assembly in Otolaryngology, September 6-11, 1954, an entire week devoted to surgical anatomy and cadaver dissection of the head and neck, and histopathology of the ear, nose and throat. The Assembly will be under the direction of Maurice F. Snitman, M.D., and registration will be limited.

Interested physicians can receive further information on either of these offerings by writing to the Department, at 1853 West Polk Street, Chicago 12.

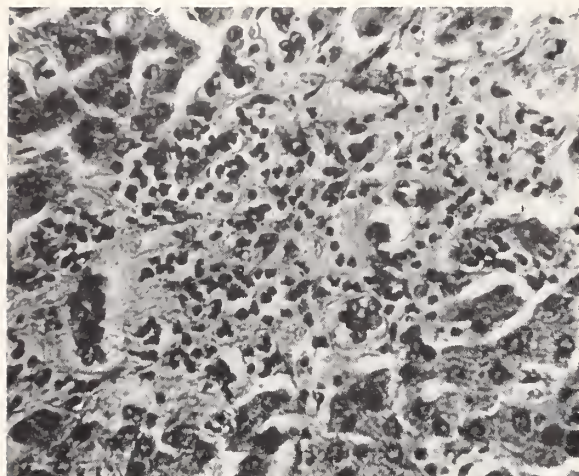


Fig. 3. Acute cholangitis.

infection. Then the terminal point, the infarction of the papillae, seems to have come rather suddenly, as Dr. Carter and Dr. Sheets have described.

Clinically, there have been cases of papillar necrosis reported that were unilateral, and you can conceive, as Dr. Carter described the pathogenesis, that such cases can occur. Also, cases have been described which have not been as fulminating, so that x-ray changes have been demonstrated. Dr. Bunge obtained a slide for me in another case which shows some of the calices. It shows maceration actually at the tips of the calices in the earlier cases, because, as the necrotic particles fall off, a little portion of the pyramid remains which may produce a filling defect. The next slide shows that complete sloughing has taken place. There is squaring off of the ends of the calices, with indentation. Dr. Bunge saw a case several months past in which ureteral colic was produced by the passage of some of these sloughed calices. As Dr. Carter emphasized, these usually occur in diabetics. These diabetics frequently have acute renal infection and terminally may develop this type of lesion.

It is to be emphasized that in diabetics who show evidence of sepsis, any renal infection may suddenly develop, as in this particular situation, and that the mortality is extremely high! The therapy is prevention, that is, realizing that this can occur, and instituting very intensive therapy to eliminate infection and sepsis, if it is present,

The JOURNAL of the Iowa State Medical Society

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COMMITTEE ON RURAL HEALTH AIDS PHYSICIAN PLACEMENT

Enlargement of its membership from five to eleven has made it possible for the Committee on Rural Health to begin its evaluation of communities desiring physicians. Deemed a desirable move for some time, the project will now get under way with adequate personnel to accomplish the task. Two members of the committee plan to visit each community requesting a physician. Criteria for the survey will consist, for the most part, of standards set up by the Council on Medical Service of the American Medical Association.

County medical societies have been asked about the openings within their confines. The needs of the community are to be rated on the doctor-population ratio, the distance to the nearest adequate medical care, the age of physicians serving the area, and lastly, the intangible factors entering the picture. A fairly accurate survey should result, and a conclusion can be reached as to the need of the community.

The desirability of the community from the physician's standpoint will be based on the hospital facilities available to him, the office accommodations offered by the community, the opportunity for an assured income, resources for his family life (housing, schools, churches and social

opportunities), and the intangible assets which may or may not exist.

A point system has been devised by the AMA for the different factors, and at the conclusion of the study a community will rate a certain number of points both on its need for a physician and its desirability from the physician's standpoint.

There would seem to be many advantages in using this system of evaluation and in the personal investigation by a team of physicians. Communities will have an opportunity to explain their need and to appraise their existing facilities. They will be asked to cast a critical eye on their assets and possibly some of them will find it necessary to correct shortcomings.

The Committee hopes to make a thorough study of the communities and then to follow this up by explaining to the community what its decision is. If the Committee feels a community is too small to support a doctor, it will endeavor to explain how the people can best utilize the medical services nearest to them. If it feels the community is too close to available facilities to make the opening attractive to a physician, it will point that out to the people. At the same time, it will check with the county medical society to be sure that medical service is being made available to the neighboring communities. Most counties have established some sort of emergency call service through which a doctor can be obtained in time of emergency. This is most necessary if medical care is centered in the county seat or some other central city. The Committee will also investigate to determine whether necessary home calls will be made by adjacent physicians.

Many communities base their need for a physician on the emergencies that may arise. It needs to be explained to them that real emergencies are rare, and that for the most part, they will obtain better medical care by utilizing the medical center near them. Time, not distance, is now the main factor in computing need, and good paved roads have lowered this element.

The Committee strongly recommends that physicians set up an appointment system for their patients. The central office receives many complaints that persons having to go to a nearby town for medical care not only have to reckon the travel time involved but also that of sitting in the doctor's office all afternoon. This is a serious public relations problem and the Committee hopes to be able to convince many physicians of the value of an appointment system.

Looking to the time when the communities will have been investigated and rated, the Committee envisions talking to prospective physicians about the good locations. It is hoped something can be done in this direction. It would be most helpful to the young man looking for a place to practice, and should assist the communities really needing physicians.

TO CUT OR NOT TO CUT

The overcrowding of the general surgeon's field, together with the proliferation of other surgical specialties which has had the effect of limiting him to the gastrointestinal area, may be responsible, in large part, for the repeated public outcries of the American College of Surgeons against unnecessary or incompetent knife-wielding and fee-splitting, according to a highly interesting article* published in the May, 1954, issue of G.P. As an actual or a potential member of the A.C.S., the surgeon may spend his time playing golf, going fishing, raising cattle or building houses, but the only branch of medicine he may practice is surgery, and not enough of that is coming his way to keep him busy. A recent questionnaire survey, the author reports, has revealed that 36 per cent of surgeons do fewer than 100 major operations each year, and 71 per cent of them lack what they consider satisfactory charity or teaching-hospital appointments.

Though he is of the opinion that the A.C.S. rule limiting members to surgery alone is outmoded and ill-advised in the present circumstances, the author points out that both the comparative idleness of a considerable share of young surgeons and the mismanagement of operations by men of limited experience and qualifications could be done away with if the ratio between surgeons' and general practitioners' fees were corrected. Besides, he contends that there is no other realistic way of attacking the abuse of fee-splitting.

The time was, he says, when every major operation was an adventure in virtually uncharted seas, in which success or failure depended upon the skill and resourcefulness of the surgeon who performed it. Nowadays, however, because nearly all procedures have been standardized and because diagnosis, over which the general practitioner originally has charge, determines with a high degree of accuracy what the surgeon will find when he has made his incision, there is less justification than there once was for the surgeon's getting \$250 when the general practitioner gets no more than \$25 or \$30.

As regards the prevalence of both unnecessary and incompetent surgery, the pseudonymous author shows no inclination to argue. But he contends that surgeons are partially to blame for both those sorts of mismanagement, since they have insisted on having the lion's share of everything in which they participate. It is his suggestion that in procedures that promise to be simple and uncomplicated, the specialist surgeon should be willing to enter the operating room as the general practitioner's assistant. Then, if everything goes as expected, the G-P can collect the larger of the two fees. If, however, unforeseen complications

develop, the two men can switch places on the spot, thus avoiding embarrassment for the less adept of the men and providing the anesthetized patient the benefit of the specialist surgeon's skill.

It is no more than realistic to recognize that since general practitioners see patients first and are in position to refer or to fail to refer them to the specialists, concessions must be made to them if an end is to be made of the abuses about which the A.C.S. complains.

LABORATORY DIAGNOSIS IN OBSTETRIC HEMORRHAGE

Post partum hemorrhage has long been a leading cause of maternal death. Of course, not all of these cases develop because of an acquired defect in the blood-clotting mechanism. In one series,¹ however, more than 10 percent of the patients admitted for antepartum hemorrhage were shown to have a clotting defect which is susceptible to prompt definitive treatment. In this group, premature separation of the placenta was the only associated diagnosis. Furthermore, almost 20 percent of the patients with premature separation of the placenta had this same blood-clotting abnormality.

The defect in clotting mechanism is a deficiency of fibrinogen, probably as the result of absorption of large amounts of thromboplastin into the maternal blood stream from the placenta and decidua. Since there is often a significant concomitant reduction in the number of circulating blood platelets, it has been suggested that the absorbed thromboplastin initiates intravascular platelet agglutination and the formation of many minute fibrin emboli, which are then distributed throughout the body. Large amounts of fibrinogen are thus removed from the circulating blood, and a clotting defect results.

Whatever the mechanism, reconstitution of adequate fibrinogen levels in the blood stream repairs the defect and restores the clotting power of the blood in this condition. This can be done by transfusing freshly drawn citrated blood or plasma, or by using purified fibrinogen, if whole blood or plasma are contraindicated or unavailable.

Thus establishing the diagnosis of fibrinogen deficiency is the initial step in the management of the one out of five premature separations of the placenta in which a serious clotting defect develops. The laboratory diagnosis is fairly simple and rather specific. Whole-blood clotting time may not be significantly altered until the fibrinogen deficiency has become quite severe. A simple bedside test can be performed which is almost diagnostic. Withdraw 5 ml. of blood from a vein, allow it to clot, and incubate the clotted blood for 30 minutes at 37° C. If no clot appears, or if at the end of

* "The General Practitioner and Surgeon," by J. Ray Thomas, M.D. (pseud.), G.P., vol. 9, number 5 (May, 1954), pp. 93-8.

30 minutes' incubation the clot appears to disintegrate or fall apart easily, the patient's fibrinogen level is critically low.

The time required for quantitative determination of the fibrinogen level may be so long that the delay in beginning therapy may be quite serious. A simple fibrin-titer assay has been developed by Schneider² and has proved quite useful for rapid estimation of fibrinogen levels. Venous blood is added to Ringer's solution in a series of test tubes so that the resultant dilution of the plasma component are 1, 10, 50, 100, 200, 400, 800, 1600. To each tube, 0.1 ml. of topical thrombin solution is added, and the highest dilution in which clotting occurs is the fibrin titer. Anything above a titer of 400 is considered normal. Both procedures are valuable as screening tests, even if accurate chemical methods are available. Together, they are certainly reliable enough to initiate therapy.

Commercially prepared solutions of thromboplastin have recently become available and are, of course, the most direct way of restoring the blood-fibrinogen level to normal. Whole blood or plasma can also be used, but the volume required may be so large that cardiovascular hemodynamics are disturbed.

1. Sawitsky, A. and Plotkin, D.: Hypofibrinogenemia and Post-Partum Hemorrhage. Proceedings of Scientific Sessions, Sixth Annual Meeting, American Association of Blood Banks, 1954.

2. Schneider, C. L.: Rapid Estimation of Plasma Fibrinogen Concentration and Its Use as a Guide to Therapy of Intravascular Defibrination. Am. J. Obst. & Gynec., 64:141-147, (July) 1952.

SUE NOT (FOR FEES), LEST YE BE SUED

At least wait until the Statute of Limitations has run

A doctor who files an action to collect fees for professional services rendered before the statute of limitations has run, almost invariably is presented with a countersuit alleging mistreatment and demanding *affirmative damages*, an editorial in the May issue of the JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY points out.

The statutory period in Iowa on malpractice actions is two years from the last time the doctor saw the patient professionally. On actions to collect open accounts, the period is five years.

The table shows the statutes of limitations on ordinary malpractice actions, actions for wrongful death, and actions to collect open accounts, in several states. In all listed states except Florida and Texas the statutory period is longer on actions to collect fees than on malpractice or death actions. In Illinois the filing of the suit to collect fees reopens the case and makes it possible for the defendant to file a countersuit for malpractice, demanding affirmative damages after the statutory period on malpractice actions has expired. In all other states listed a countersuit can be filed after

the statutory period on malpractice actions has run, only as a defense to the fee action and not for the collection of affirmative damages.

STATUTES OF LIMITATIONS
(Numbers indicate years)

State	Ordinary Malpractice	Wrongful Death	Collection of Accounts
California	1	1	4
Florida	3	2	3
Illinois	2	1	5
Indiana	2	2	6
Iowa	2	2	5
Kansas	2	2	3
Kentucky	1	1	5
Massachusetts	2	2	6
Michigan	2	3	6
Minnesota	2	2	6
Missouri	2	1	5
Nebraska	2	2	4
New Jersey	2	2	6
Ohio	1	2	6
Pennsylvania	2	1	6
Texas	2	2	2
West Virginia	1	2	5
Wisconsin	2	2	6

JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY
53:478, (May) 1954

POST OFFICE URGES CARE IN BLOOD PACKAGING

The assistant postmaster in Chicago has protested to the AMA's general secretary, Dr. Lull, that many doctors are mailing blood specimens in glass vials placed in metal screw-topped cardboard tubes to private and governmental laboratories, and, because of carelessness in screwing the tops on securely, making it possible for the vials to slip from the tubes. When the vials fall out and break, the blood stains the other mail and is lost; when they fall out but do not break, postal employees reinsert them, perhaps inadvertently exchanging tubes as they do so.

That this sort of thing occurs occasionally in Iowa, as well as in Illinois, is suggested by a comment regarding the breakage of such vials in the leptospirosis report published in this issue of the JOURNAL. Perhaps these accidents are all the fault of the postal clerks, but perhaps they aren't, and the danger that specimens and identifications may be exchanged in transit is enough to make anyone shudder.

DRUG HOUSES AID RELIEF EFFORT

CARE, Inc. announces that American pharmaceutical firms have made large and unsolicited gifts of penicillin and dehydro-streptomycin for use among the displaced and disease-ridden civilians of Indo-China.

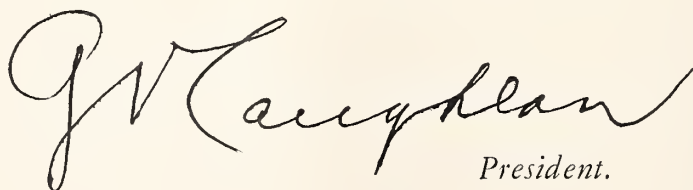
Following the lead of the college hospital at Berea, Kentucky, Bristol Laboratories, Commercial Solvents, Inc., and Charles Pfizer & Co. made substantial contributions.

President's Page

Some fifteen months ago the Iowa State Medical Society Educational Fund was set up to help medical students needing financial assistance to complete their studies. Funds were obtained from many physicians willing to lend money for ten years to the project. We are most grateful for their generosity. They made it possible for the Fund to function during this past year.

So great is the need, however, that it has proved impossible to procure enough loans from physicians to implement the program satisfactorily. Consequently, the House of Delegates voted at its 1954 meeting to increase the annual dues \$10.00 a year for the next five years, the \$10.00 to be earmarked for the loan fund. Only two dissenting votes were cast on this proposal.

This means that when dues for the State Society are collected next year, each physician will pay an additional \$10.00 for the loan fund. Thus each member will participate equally in assisting medical students. Times have changed greatly since many of us obtained our own education. Most of the students are married; many have children. The cost of a medical education is now far greater than it was twenty, thirty, or forty years ago, and the cost of living is even higher. Those of us who received our training through the assistance of prevailing endowments and grants should welcome the opportunity to do our part in helping the present generation. The cost per member is small, but the benefits will be great. I know you will contribute your portion graciously.

A handwritten signature in cursive script, reading "J. W. Laughlan". The signature is fluid and elegant, with a large initial "J" and a long, sweeping underline.

President.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

LOW BACK PAIN AND SCIATICA, by *Louis T. Palumbo*, M.D. (Philadelphia, J. B. Lippincott Company, 1954. \$3.00).

THE ATOM STORY, by *J. G. Feinberg*, M.Sc. (New York, The Philosophical Library, Inc., 1953. \$4.75).

FIFTY YEARS OF MEDICINE, by *Lord Horder*, G.C.V.O., M.D., F.R.C.P. (New York, The Philosophical Library, Inc., 1954. \$2.50).

THE YEAR BOOK OF ENDOCRINOLOGY (1953-1954 YEAR BOOK SERIES), by *Gilbert S. Gordan*, M.D., Ph.D. (Chicago, The Year Book Publishers, 1953-1954. \$6.00).

RECENT ADVANCES IN CARDIOVASCULAR PHYSIOLOGY AND SURGERY. (A SYMPOSIUM PRESENTED BY THE MINNESOTA HEART ASSOCIATION AND THE UNIVERSITY OF MINNESOTA.) \$1.00.

TRANSACTIONS OF THE AMERICAN OPHTHALMOLOGICAL SOCIETY, Vol. LI. (Eighty-ninth Annual Meeting, Hot Springs, Virginia, 1953). (New York, Columbia University Press, 1954. \$18.00).

ENDEMIC GOITER, by *John B. Stanbury*, M.D., *Gordon L. Brownell*, Ph.D., *Douglas S. Riggs*, M.D., *Hector Perinetti*, M.D., *Juan Itoiz*, Ph.D., and *Enrique B. Del Castillo*, M.D. (Cambridge, Mass., Harvard University Press, 1954. \$4.00).

BOOK REVIEWS

Additional Book Reviews on page 307

SCHOOL HEALTH SERVICES, by *Charles C. Wilson*, M.D. (Washington, D. C., National Education Association, 1953. \$5.00).

SCHOOL HEALTH SERVICES is a report of the joint committee on health problems in education, of the National Education Association and the American Medical Association with the cooperation of contributors and consultants, and edited by Charles C. Wilson, M.D., Professor of Education and Public Health, Yale University, and copyrighted in 1953 by the National Education Association.

This book discusses all of the aspects of school health under special headings, with detailed descriptions of the different services. Under student health, the architecture of a good school health committee is gone into and is designated the Advisory School Health Council. Included or represented in that body are, school administrator, custodian, various civic agencies, Parent Teachers Association, voluntary health agencies, the Mental Society, Medical Society, the Dental Society, Health Department and the nurses.

The program starts with the preschool child, and suggests periodic examination throughout the primary and secondary school life, either by the school health physician, or by physicians appointed by the Medical Society to make such health appraisals, or better still, by the family physician in his own office, where possible.

The dental examinations are to be made by the same means. Throughout the period, screening tests are conducted on visual status, auditory acuity, and mental health of the children, either by the school health physician, by technicians assigned these duties,

or by the teachers. Referrals are then made for special study of those found likely to require such special services.

Other phases taken up include health counseling and follow-up of health problems, and the adjusting of programs to individual needs—special health problems such as heart disease, epilepsy, and tuberculosis.

Under separate headings are discussed emergency care and the legal authority or safeguards for such procedures, communicable disease control, school sanitation and playground conditions, and the health services in physical education and school camping. Also, there is a chapter on school personnel.

This is a well outlined book, with a wealth of both general and specific information on the problems of school health, the accumulation of four biennial conferences of the National Education Association and its component state and city contributors, of the American Medical Association and its component state and local contributors, of the Public Health Association, and the National and State Dental Association, as well as consultants from all interested fields.

This book should be available to all schools that have or are contemplating having school health programs.—*C. P. Phillips*, M.D.

SURGERY OF THE BILIARY TRACT, PANCREAS AND SPLEEN, by *Charles B. Puestow*, M.D. (Chicago, The Year Book Publishers, 1953. \$9.00).

This book is, as Dr. Puestow states, a handbook of surgery: a guide to methods or technics of pre-operative and post-operative care. It was written for the trained and experienced physician in an attempt to improve his results.

The handbook is divided into four sections—(1) The Liver, (2) The Extra-hepatic Biliary System, (3) The Pancreas, and (4) The Spleen. In each of these sections are to be found clear and concise résumés on anatomy, physiology, diseases and surgical technic. Although the book is not a text with long discussions, the author attempts to deal with the facts. He does delve into both common and infrequent conditions, simple and complicated. And in an effort to clarify his method of surgical technic, an abundance of diagrammatic drawings have been supplied, which leave little to be desired.

Surgical residents will find Dr. Puestow's handbook a valuable aid during the months of their didactic training. It offers a means for orientation away from the operating table. The well-trained surgeon will find little, if anything, new; but, he will be able to refresh his memory quickly on most questions that might arise in the fields discussed.

The reviewer was impressed with this "primer" from one standpoint particularly—not only does Dr. Puestow offer factual information, but also there is a thread of his philosophy of surgery through the book, which is most welcome.—*Ferald Mauk*, M.D.

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COMING PROGRAMS

September 22 and 23—Des Moines

The scientific program will be presented by a panel from Mayo Clinic, by Dr. Francis Murphy, of Milwaukee, and by Dr. Willard Allen, of St. Louis. This is also our annual meeting and election.

November 4—Cedar Rapids

This program will feature Dr. Priscilla White, of Boston, and Dr. Lee Forrest Hill, of Des Moines.

January 20, 1955—Des Moines

Program to be given by the staff of Iowa Methodist Hospital, with Dr. Edward Davis, of Chicago, as guest speaker.

May 19, 1955—Des Moines

Lederle Laboratories has asked permission, in association with the Iowa Academy, to present one of its remarkable symposia at Hotel Savery. The general topic will be "Heart Disease," and the speakers will be nationally known in their fields. Topics have been selected for six speakers, and time is to be allowed for question periods. Lederle graciously provides the luncheon and follows the scientific program with a cocktail party. Wives are invited and entertainment will be provided for them.

These symposia are known for their excellence in many parts of the United States and Canada. Watch for details.

HOUSECLEANING TIME

Incredulity was our first reaction when we heard that those colleagues of ours in Iowa who belong to a large college had been informed that their state was "quarantined", that the College would accept no new members from Iowa, irrespective of their eminent qualifications; that our surgeon colleagues have been "denied" the right to hold meetings in the state and that the only way Iowa members may be restored to "grace" would be on the terms laid down by the College, in other words, by submitting their books for a

financial audit. As alternative to submitting to the audit, the members will be permitted to resign, or be dropped as members.

If the College is in earnest about "cleaning out" all the unethical practices which they allege spawn in Iowa, in view of the fact that they gave out the press releases which were the basis of so much publicity, why don't they wait a little while longer, exhibit some degree of charity toward their Iowa members, and give us all an opportunity to see what is going on here and do something about what we find?

The Iowa Academy of General Practice certainly pledges its support to such a program. We do not want to see our surgeon colleagues suffer the slightest disgrace. We do not want to see them lose their cherished membership in an organization that gives them standing among other surgeons. In short, the Academy wants to support them whatever they do about the financial audit. The primary aims of the surgeons and the general practitioners are convergent, not divergent. Besides, there exists genuine affection and admiration among the general practitioners of Iowa for their surgeon confreres.

Why should not we general practitioners and our surgeon friends work together on this problem, as we have on many others? But, let us hunt and clean up *all* evils that have been charged against us, fee-splitting, unnecessary surgery, ghost surgery and even exorbitant fees; not just be satisfied, as the College seems to be, by controlling only fee splitting among some 200 surgeons, practically all of whom are not and never have been guilty of indulging in such practices. This recalls Hitlerism, where 100 innocent men, women and children were shot because of the alleged mis-deeds of one or two, just to make "an example." In America, we outlawed that principle farther back than anyone can remember.

If the College will grant its members a bit of tolerance and be just a little forbearing, the Iowa Academy would like to discuss possibilities for a satisfactory solution of this problem with our surgeons. Some of their loyal patients—and they are ours, too—have been bewildered by the accusing articles that appeared in popular magazines and newspapers, and though we are convinced that the

charges contained in them are exaggerated, we are anxious, both individually and as an organization, to remove all grounds for further criticism. We neither wish nor intend to defeat the lofty ideology of the College, but only to prove to our patients that we, here in Iowa, are more deeply concerned about any unethical practices existing in our state than any outside organization can possibly be. When we get through, the College will be glad to lift its restrictions and try to forget the whole sorry mess.

To quote President Eisenhower in his address at the Bicentennial Celebration of Columbia University, what we need is "more understanding and intelligence, and less prejudice and passion."

BOOK REVIEWS

Additional Book Reviews on page 305

A DOCTOR TALKS TO WOMEN, by *Samuel Raynor Meaker*, M.D. (New York, Simon & Schuster, 1954. \$3.95).

Dr. Meaker has written a very thorough explanation, in non-medical language, of most of the gynecological problems for which women seek a physician's advice. It would be of great help to physicians if their women patients could have read this book before coming to them.

Today, the ordinary individual is far more interested in medical problems than he used to be—mainly because there is so much "medical literature" in our popular magazines. This book does much to correct some lay misconceptions relating to female physiology and anatomy, and also discusses marital problems and relationships in a very understanding and easily readable way.

It would be a fine education for women (and for some men) to read this book.—*H. Kirby Shiffler*, M.D.

ANTIBIOTICS ANNUAL, 1953-1954: PROCEEDINGS OF THE SYMPOSIUM ON ANTIBIOTICS, edited by *Henry Welch*, Ph.D. and *Felix Marti-Ibanex*, M.D. (New York, Medical Encyclopedia, Inc., 1954. \$8.00).

The proceedings of the Symposium on Antibiotics of October 28, 29, and 30, 1953, are hereby presented in book form. The volume is perhaps more of interest to those in the pharmaceutical manufacturing industry and bacteriology than to the clinician, though many excellent clinical papers are included.

The isolation, preparation, physical and chemical properties and antibacterial spectrum of all of the presently used antibiotics is presented, including antifungal agents which promise to solve some of the new problems we encounter as a result of the widespread use of the older antibiotics.

Studies indicating lack of hemopoietic toxicity of all broad-spectrum antibiotics, a summary of anaphylactic reactions to penicillin, an evaluation of the effectiveness of new types of penicillin in syphilis and other worthwhile papers are of interest to the clinician.

The uses of antibiotics in animal husbandry are also discussed. The nonclinical articles are filled with laboratory procedures and logarithmic tables which

only research workers would understand, but if one avoids these, there remains a fair portion of interesting clinical information.—*Charles H. Gutenkauf*, M.D.

HOLT PEDIATRICS, ed. by *L. Emmett Holt, Jr.*, M.D., and *Rustin McIntosh*, M.D. (New York, Appleton-Century-Crofts, Inc., 1953. \$15.00).

This textbook has long been a favorite, and its newest revision provides the student and practitioner an up-to-date, concise, single-volume reference work in pediatrics. The tremendous accomplishment of keeping this work authoritative and current has resulted from cooperative authorship. The list of collaborators should in itself be the book's greatest recommendation.

Developments in the field of pediatrics have been rapid and many. Hormonal therapy with ACTH and cortisone, surgical advances of the gastrointestinal tract and heart, newer antibiotics and viral diseases are but a few of the many aspects of this text which concern the everyday practice of those devoting time to pediatrics. Though the final chapter on accidents and poisonings is to be commended, I am critical of its brevity.

The medical student should find this textbook most helpful, if he isn't overcome by visual fatigue. It seems to me a double-column page and something less than glossy paper would have been excellent prophylaxis.—*C. L. Burr*, M.D.

RECONSTRUCTIVE SURGERY OF THE EYELIDS, by *Wendell L. Hughes*, M.D., F.A.C.S. (St. Louis, C. V. Mosby Company, 1954. \$8.50).

Dr. Hughes has given a comprehensive review of plastic operations of the eyelids, many of which are his own procedures.

Almost one-half of the book is made up of a historical discussion of plastic surgery, including all procedures and techniques that have been employed as far back as the 16th century.

The pre- and post-operative care is explained at length, and the author goes into quite a bit of detail about materials used for the dressings.

A large number of illustrative case reports are included in the volume.

One of the high-lights of the book is the author's own technique of complete reconstruction of the lower eyelid, which is by now recognized as standard procedure in cases of total loss of the lower lid.

The book is profusely illustrated so that every procedure can be followed step by step.

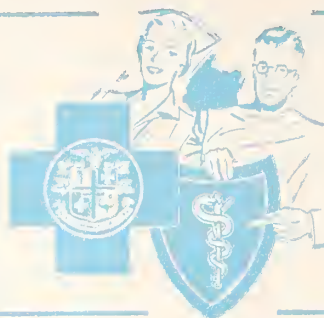
Although most of the plastic procedures are covered in other texts on ocular surgery, it is a valuable book because of the great detail and comprehensive coverage of the subject.—*Henry H. Gurau*, M.D.

CLINICAL ENDOCRINOLOGY, by *Karl E. Paschkis*, M.D., *Abraham E. Rakoff*, M.D., and *Abraham Cantarow*, M.D. (New York, Hoeber-Harper, 1954. \$16.00).

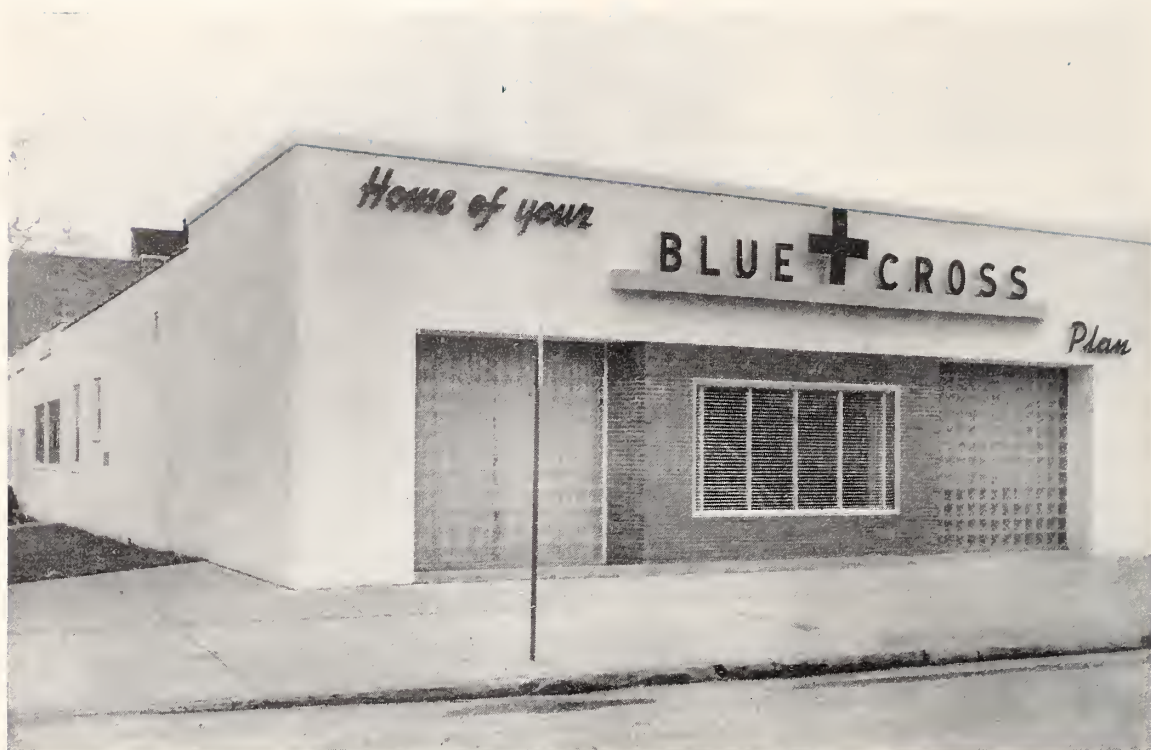
Each year the study of diseases of the internal secretory glands becomes more complex. And because textbooks on the subject have become numerous and progressively more massive, we practitioners are anxious to find a few reliable source books to use for

(Continued on page 316)

BLUE CROSS



BLUE SHIELD



NEW HOME OF SIOUX CITY BLUE CROSS

Associated Hospitals Service, Inc., the Sioux City Blue Cross Plan, moved into its new offices the early part of this year.

The new address is 1622 Pierce Street, in Sioux City. This Plan provides Blue Cross coverage for entire state of South Dakota and for 26 counties in northwest Iowa.

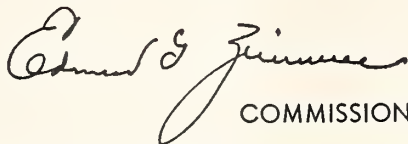
Blue Shield is sold to persons in the above-mentioned Iowa area by the Sioux City Blue Cross-Blue Shield sales department.

Mr. Morris E. Bandy, of Sioux City, is the Blue Cross-Blue Shield Physician Relations Representative for the Iowa area of the Sioux City Plan. Mr. R. W. Glenn is President of the organization.

Blue Shield Monthly Statistics

Claims Paid, May, 1954.....	\$337,344.99
Number of Claims	12,885
Enrollment May 1, 1954	439,271

STATE DEPARTMENT OF HEALTH


COMMISSIONER

GAMMA GLOBULIN DISTRIBUTION, 1954

Measles and Infectious Hepatitis

Like every other state, Iowa will receive gamma globulin from the Communicable Disease Center, Public Health Service, Department of Health, Education and Welfare, as it did in 1953. Allocations are being made to each state on the basis of the average number of reported cases of measles and poliomyelitis for the last five-year period. Since Iowa has already exceeded its quota allotted for measles and infectious hepatitis, it is continuing to receive more only because physicians here are reporting epidemic incidences of those diseases. Cases must continue to be well reported if we are to continue getting gamma globulin for the contacts.

But gamma globulin is to be used *only for prophylaxis, and not for therapy* of measles, infectious hepatitis and poliomyelitis.

GAMMA GLOBULIN FOR MEASLES PROPHYLAXIS

A. Prevention:

1. For children under 3 years of age to prevent bronchopneumonic complications.

2. For older children, such as those having diabetes, rheumatic fever or rheumatic heart disease, severe attacks of asthma, or other debilitating diseases which might be aggravated by an attack of measles.

3. For measles-susceptible pregnant women in their later months of pregnancy if the physician believes that measles might complicate either pregnancy or labor.

B. Modification:

For children between 3 and 5 years of age in whom an immunity to measles should be permitted to develop, but in whom the severity of the attack should be controlled.

DOSAGE FOR MEASLES PROPHYLAXIS

Age	Prevention	Modification
Up to 6 months	2 cc	....
6 months to 3 years	3 cc	....
Over 3 years	1 cc per year	0.2 cc per year
Susceptible pregnant women	20 cc	....

Since more physicians are sure of the ages than are sure of the weights of those to whom gamma

globulin is to be given for measles, dosage is given here according to age. (Weight dosage may be found in the instruction slip packaged with the gamma globulin.)

GAMMA GLOBULIN FOR INFECTIOUS HEPATITIS CONTACTS

1. *Household contacts:* Since there is no age or sex difference in susceptibility to infectious hepatitis, all household contacts should be given gamma globulin.

2. *Close associates,* such as playmates and office workers at adjoining desks, should be given the same opportunity for gamma-globulin protection given household contacts.

3. *Nurses, laboratory workers and other hospital staff:* Many are now considering infectious hepatitis as an occupational disease or hazard to those groups. Unless all hospitalized cases are cared for from the time of their admission under isolation precautions, secondary cases can be expected. Hospital staff and patients in contact with any infectious-hepatitis case should be given gamma globulin.

4. *Classroom contacts in schools:* If the supply of gamma globulin permits, children who have definitely been exposed to infectious hepatitis in the classroom will be considered eligible for prophylactic gamma globulin.

The gamma globulin packaged for measles use is to be used for infectious hepatitis.

DOSAGE FOR INFECTIOUS HEPATITIS PROPHYLAXIS

0—25 lbs.	1 cc	75—100 lbs.	4 cc
25—50 lbs.	2 cc	100—125 lbs.	5 cc
50—75 lbs.	3 cc	Over 125 lbs.	6 cc

GAMMA GLOBULIN FOR GERMAN MEASLES CONTACTS

The use of gamma globulin here is strictly limited to susceptible women in their first trimester of pregnancy with definite exposure to a case of German measles. *Dosage: 20 cc. All injections of gamma globulin are to be given intramuscularly.*

Gamma Globulin for Polio Prophylaxis

Although last year's studies on gamma globulin did not demonstrate any effectiveness of the material in the prevention or modification of poliomyelitis, it is still necessary that its use be kept under control at least during 1954. The larger

(Continued on page 312)

POLIOMYELITIS SUMMARY FOR IOWA
January 1, 1946 through May 8, 1954

County	1946		1947		1948		1949		1950		1951		1952		1953		1954	
	Cases	Rate*	Cases	Rate*	Cases	Rate*	Cases	Rate*	Cases	Rate*	Cases	Rate*	Cases	Rate*	Cases	Rate*	Cases	Through May 8
Adair	2	15.7	1	7.8	3	23.7	6	48.6	7	57.5	1	8.2	8	66.2	..	..	..	..
Adams	3	30.1	..	..	2	20.1	3	33.8	2	22.8	1	11.7	9	106.7	..	..	..	..
Allamakee	5	28.2	1	5.6	2	11.1	5	30.4	9	55.0	2	12.3	11	68.1	8	49.0	2	2
Appanoose	1	4.2	1	4.1	2	8.4	7	34.9	1	5.0	2	10.5	6	32.2	3	16.2	..	..
Audubon	..	..	..	..	6	52.6	21	181.1	8	69.1	1	8.7	9	78.0	4	34.2	..	..
Benton	2	8.7	2	8.7	4	17.4	17	75.0	8	35.3	2	9.0	10	44.2	2	8.7	..	..
Black Hawk	14	16.1	2	2.2	15	16.8	57	58.1	38	38.1	21	20.4	118	112.3	16	15.2	..	..
Boone	4	13.3	1	3.3	16	52.9	9	32.0	8	28.6	3	10.7	28	100.8	1	3.9	1	1
Bremer	13	70.3	1	5.3	13	7.0	7	37.2	7	37.1	5	26.3	15	78.5	3	15.4	..	..
Buchanan	3	13.7	..	..	4	18.0	2	9.2	11	50.7	3	13.6	6	27.1	3	14.7	..	..
Buena Vista	10	48.6	..	..	17	81.7	9	42.8	7	33.1	6	28.2	49	229.0	5	22.9	..	..
Butler	8	43.9	..	..	2	10.9	8	46.0	16	92.3	2	11.5	31	179.6	4	22.9	..	..
Calhoun	2	11.4	3	17.0	9	51.2	22	130.5	10	59.5	9	53.4	61	363.6	6	35.6	..	..
Carroll	1	4.3	..	..	10	43.2	2	8.6	9	39.1	4	17.3	24	103.8	1	4.3	..	..
Cass	2	11.0	..	..	20	111.0	5	26.9	8	43.1	..	..	38	205.3	3	16.0	..	..
Cedar	4	23.6	..	..	1	5.8	8	47.6	10	59.5	8	47.3	21	124.1	3	17.5	..	..
Cerro Gordo	10	21.2	..	..	51	105.6	19	41.5	14	30.6	5	10.8	51	109.6	13	27.4	..	..
Cherokee	3	15.3	3	15.2	17	86.3	8	41.9	3	15.7	7	36.8	159	836.6	12	70.0	..	..
Chickasaw	4	25.6	..	..	3	19.0	7	46.1	9	59.3	2	13.1	39	256.1	2	12.9	..	..
Clarke	..	..	..	..	2	19.7	4	42.5	1	10.6	..	..	8	87.2	2	21.7	..	..
Clay	10	53.2	4	21.0	10	52.2	7	38.8	14	77.6	6	33.1	68	374.0	9	48.7	..	..
Clayton	5	20.7	2	8.2	1	4.1	14	61.8	10	44.4	3	13.5	14	63.3	13	58.4	..	..
Clinton	13	28.9	6	13.3	16	35.5	29	59.0	30	60.6	7	13.9	38	74.8	23	44.2	2	2
Crawford	3	14.8	..	..	27	134.1	3	15.1	10	50.7	5	25.5	38	194.3	12	60.7	..	..
Dallas	1	4.1	3	12.4	8	33.3	10	42.1	7	29.5	3	12.7	35	149.3	13	54.8	..	..
Davis	..	..	..	..	1	8.9	2	20.0	4	40.4	..	..	9	92.8	..	..	..	..
Decatur	1	7.4	..	..	15	112.9	2	15.8	15	119.5	1	8.0	12	97.7	2	16.2	..	..
Delaware	4	21.4	1	5.3	1	5.3	10	56.2	8	45.1	3	17.0	11	62.6	4	22.5	1	1
Des Moines	4	10.0	..	..	5	14.0	24	57.6	56	133.1	9	21.1	10	23.1	4	9.0	..	..
Dickinson	6	46.4	1	7.6	3	22.7	2	15.7	8	62.7	..	..	8	62.1	..	..	..	..
Dubuque	5	7.6	4	6.0	5	7.5	90	127.3	16	22.4	8	11.1	67	91.7	12	16.0	..	..
Emmet	6	43.6	..	..	27	194.8	5	35.5	1	7.1	1	7.0	6	42.1	2	13.8	..	..
Fayette	1	3.4	2	6.8	15	51.4	1	3.5	12	42.5	9	31.0	17	60.5	14	49.2	..	..
Floyd	3	14.6	6	29.0	3	14.4	8	37.4	9	41.9	3	13.8	25	114.6	8	35.9	..	..
Franklin	2	12.2	..	..	24	146.5	26	159.5	4	24.5	8	49.2	14	86.2	4	24.3	..	..
Fremont	4	28.4	3	21.4	11	79.0	1	8.0	4	32.5	2	16.6	11	93.2	..	..	..	..
Greene	..	..	..	..	1	6.0	10	63.8	6	38.4	2	13.0	16	104.5	2	13.0	..	..
Grundy	4	30.4	..	..	..	..	2	14.6	11	80.4	4	29.1	27	196.1	2	14.3	..	..
Guthrie	3	17.5	1	5.8	6	35.0	31	202.4	1	6.5	1	6.7	26	176.3	2	13.5	..	..
Hamilton	2	10.4	1	5.2	6	31.4	8	40.6	11	56.0	2	10.2	32	163.2	2	10.1	..	..
Hancock	3	19.0	..	..	2	12.5	8	52.9	12	79.5	3	20.0	25	166.6	6	39.5	..	..
Hardin	3	13.5	1	4.4	3	13.5	26	117.0	15	67.6	5	22.5	19	85.8	6	27.0	..	..
Harrison	..	..	..	..	87	414.0	10	50.6	10	51.2	3	15.7	53	281.3	6	31.9	..	..
Henry	4	22.0	..	..	2	10.9	4	21.4	16	85.6	1	5.3	4	21.2	1	5.7	1	1
Howard	3	22.0	..	..	3	21.5	7	53.2	3	22.8	1	7.7	18	138.4	2	15.2	..	..
Humboldt	1	7.3	3	21.9	3	21.9	15	114.8	3	23.0	2	15.3	11	84.4	11	83.3	..	..
Ida	1	9.5	3	28.8	16	155.0	2	18.6	4	37.3	6	56.3	59	555.7	11	102.3	..	..

Gamma Globulin Distribution 1954

(Continued from page 309)

supply available this year makes it possible to extend the use from the previous limits of household-contact groups to larger groups.

In 1954, gamma globulin is *not to be used in therapy* for poliomyelitis, any more than for therapy in measles and infectious hepatitis. Instructions for its use in polio prophylaxis given below apply to the 96 counties not participating in the field trials of the Salk vaccine. Scott, Linn and Woodbury counties, which have that program, have already received instructions.

Groups: Iowa will continue the use of gamma globulin for family contacts of paralytic or non-paralytic poliomyelitis, but prefers to broaden the group beyond the family during 1954. Those eligible may include residents in an apartment house, camp group, day nursery, classroom, or a corn-detasseling crew composed of high-school youngsters, or, if situations warrant, neighborhoods or areas may be included. The last-mentioned and largest sort of group will be considered upon the recommendation of the local health officer.

Ages: Anyone in such group who is under the age of 35 will be considered eligible for prophylactic gamma globulin for poliomyelitis. The age exception will be that pregnant women of any ages, in these groups, will be considered eligible.

Dosages: Recommendations for 1954 include an increase of dosages from the basic 1953 dosage of 0.14 cc per pound of body weight (to a maximum of 20 cc per person) to a 1954 basic 0.20 cc per pound of body weight (to a maximum of 30 cc per person). The maximum dosage is recommended for any eligible pregnant woman.

MECHANICS OF DISTRIBUTION

Physicians may obtain gamma globulin on request either from the Department of Health, Division of Preventable Diseases, from the Regional Health Office nearest the physician, or from depots set up in certain hospitals and local health department offices. Since this system of distribution has been in effect for some time in Iowa, and since most physicians know where to obtain the material, a list of the stations or depots is omitted here.

REQUEST FOR POLIO GAMMA GLOBULIN

Requests must include reports of the cases of poliomyelitis of which the contacts are to be protected. The physician, or the person or agent reporting for the physician, *must state whether the case is paralytic or non-paralytic poliomyelitis*, and must state the approximate weights of the persons who are to receive the material, if the dispensing officer is to figure the amount to be sent.

Gamma globulin packaged for measles and infectious hepatitis is not to be used for poliomyelitis prophylaxis. Supplies of gamma globulin for (1)

measles and infectious hepatitis and (2) for poliomyelitis prophylaxis must be ordered separately and dispensed in the same manner.

MICROCOCCLUS ENTERITIS WITH SHOCK FOLLOWS ANTIBIOTIC THERAPY

In the April issue of *GASTROENTEROLOGY*, the Army Medical Corps physicians Lt. Col. C. S. Christianson, Capt. M. P. Dacquisto and Lt. W. H. Dobbs warn that increasing use of the broad-spectrum antibiotics means that physicians may anticipate an increase in micrococcus enteritis cases with shock, and consequently more fatalities.

They recommend the following precautions in the administration of broad-spectrum antibiotics:

1. "Antibiotics should be used only when a definite indication exists, and preferably after sensitivity studies have been made.

2. "Gastro-intestinal upsets, particularly diarrhea, should be a warning signal, and if symptomatic therapy does not give relief, the offending antibiotic should be discontinued.

3. "Should the diarrhea become intractable and the stool cultures show *Staphylococcus aureus*, erythromycin should be given promptly.

4. "If *Staphylococcus* is suspected as the cause for enteritis, the laboratory personnel should be notified. Appropriate media may then be utilized and resistance studies accomplished."

The Medical Corps physicians made their recommendations in the course of reporting the first instance of a patient's surviving shock secondary to micrococcus enteritis following broad-spectrum antibiotic therapy.

MORBIDITY REPORT

Disease	May 1954	Apr. 1954	May 1953	Most cases reported from these counties
Diphtheria ...	0	0	3	.....
Scarlet Fever	177	212	212	Des Moines, Monona, Polk
Typhoid Fever	1	1	5*	Scott
Smallpox	0	0	0	.....
Measles .....3,520	2,227	3,135		Crawford, Harrison, Monona, Polk, Pottaw., Scott
Whooping Cough	28	10	13	Floyd, Hardin, Woodbury
Brucellosis ...	26	13	22	Black Hawk (3), others scattered 2 or 1 to a county
Chickenpox ..	918	1,187	811	Dubuque, Harrison, Linn, Polk
Meningococcus Meningitis .	6	3	4	Calhoun, Clinton, Linn (2), Polk, Webster
Mumps .....1,396	1,091	814		Des Moines, Monona, Polk, Pottawattamie, Scott
Poliomyelitis	5	7	14	1 case in Boone, Jasper, Marion, Warren, Webster (3 paralytic, 1 non-paralytic, 1 unspecified)
Infectious Hepatitis ..	527	495	315	Buena Vista, Polk, Webster
Rabies in Animals..	47	45	20	Clayton 4, Dallas 3, Hardin 6, Muscatine 5, Polk 4 —others 2 or 1 to a county
Tuberculosis	102	63	143	For the state
Syphilis	165	110	197	For the state
Gonorrhea ...	74	53	83	For the state

* Paralytic

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. LESTER R. HEGG, Rock Valley

President-Elect—MRS. CHARLES H. FLYNN, 709 W. 15th Street, Clarinda

Secretary—MRS. ROBERT P. MASON, 5818 Chamberlain Drive, Des Moines 12

Treasurer—MRS. HOWARD H. SMEAD, 3333 Grand Avenue, Des Moines 12

LINES FROM THE PRESIDENT

A glorious Silver Anniversary Convention, already history, along with the reports of the year's achievements is now a part of Auxiliary archives and among our fondest memories. The Golden Anniversary will be a reality to many; to others, it will be a challenge for the present, and to all a desired goal.

At present, the new programs being planned by officers and committee chairmen demand our immediate attention. Fall conferences in each of the eleven districts are being scheduled. This will afford an opportunity for your president to meet you and for councilors and Auxiliary members to become better acquainted. Friendly acquaintance is a virtue of a good Auxiliary. We learn from each other, and progress when we are united for a noble purpose. Good thinking, right attitudes, new inspiration and self-expression are outgrowths of friendly conferences.

On this we build!

MRS. LESTER R. HEGG

COUNTY AUXILIARY ACTIVITIES

Dallas-Guthrie

The Dallas-Guthrie Auxiliary met May 20, 1954, in Adel. Miss Evelyn Kile, County Public Health Nurse was a guest. The Auxiliary members were invited to listen to a talk given by Dr. Fred Sternagel, West Des Moines, on "The Business Side of Medical Practice." The Dallas-Guthrie Auxiliary was proud to rate 132 per cent in subscriptions to *TODAY'S HEALTH* and thereby gain a place on "The Exclusive List." Mrs. E. T. Warren, delegate to State Convention, gave an interesting report. Dallas-Guthrie is proud, also, of the honorary membership and past president's pin conferred upon Mrs. M. N. Voldeng, Independence, organizer and first president of Dallas-Guthrie Auxiliary in 1928, and also first president of the State Auxiliary.

MRS. CHARLES E. PORTER

Grundy

On April 15, 1954, the second meeting of the Grundy County Auxiliary was held in the Memo-

rial Room of the Grundy County Hospital, with nine persons present. Aims and purposes of the organization were discussed at length. Dues of five dollars were decided upon and were collected from all members present.

The next meeting of the group will be a dinner with the Medical Society. On the agenda for that meeting are the further details of organizing, including the drawing up of by-laws.

MRS. LYNN E. FRINK

Page

Two future nurses, accompanied by their registered-nurse sponsor, Mrs. L. L. Lilly, represented the Page County Medical Auxiliary at the luncheon and tour of Broadlawns Hospital. Many favorable comments were accorded the very artistic third-dimensional poster made by Mrs. Stuart T. Ramsdell, of Clarinda, and depicting the theme of our Future Nurses Club in Shenandoah, when it was displayed at the State Meeting. We thank Dr. and Mrs. Render for providing transportation to the convention for our future nurses and their sponsor.

Plymouth

The Plymouth County Auxiliary held two meetings in May. The first, on May 4, was a dinner at the home of Mrs. F. C. Bendixen, Le Mars. The doctors attended a staff meeting at Sacred Heart Hospital following dinner. Auxiliary guests were Mrs. Laurence Pierson and Mrs. Joe Krigsten, Sioux City, Mrs. N. E. Weems, Paullina, and the State President, Mrs. Lester R. Hegg, Rock Valley. Mrs. M. J. Joynt was assisting hostess.

On May 17, the Plymouth County Auxiliary entertained the Future Nurses of the county at a tea in the activity room of the Central High School, Le Mars. Thirty-seven future nurses attended. Mrs. F. C. Bendixen, president, presided. Speeches were made by Mrs. Laurence Pierson, Sioux City; by Mrs. Ernest Stoudt, Instructor of Nurses at Methodist Hospital, Sioux City, and Miss Marilyn Bee, a Future Nurse of Central High School, Sioux City. Mrs. Carroll Brown and Mrs. Joe Krigsten, Sioux City, and Mrs. Lester R. Hegg, Rock Valley, State President, were present.

The committee in charge consisted of Mrs. M. J. Joynt, Mrs. L. C. O'Toole, Mrs. R. J. Fisch, Mrs. W. L. Downing, Mrs. Harry Vander Stoep, Mrs. M. D. Hayden-Marcus, and Mrs. Ralph Brundige.

MRS. F. C. BENDIXEN

Polk

The Polk County Auxiliary sponsored a card party on March 26 for the benefit of the Future Nurses Clubs and Student Nurse Loan Fund. Following a dessert luncheon at Hoyt Sherman Place, Mrs. Joseph Priestley welcomed members and guests. Tables were then arranged for bridge, canasta, and samba. Mrs. Henry A. Guraq and Mrs. J. H. McNamee were in charge of the benefit. They were assisted by Mesdames Henry Decker, N. C. Wirtz, George Finch, Robert Updegraff, C. C. Woodburn, Ralph Dyson, John Bakody, Clifford Lash, Jr., and George Watters. Reservations were made for 238 members and guests.

MRS. HOWARD G. ELLIS

Pottawattamie

The regular monthly meeting of the Auxiliary to the Pottawattamie County Medical Society was held Tuesday evening, April 20, 1954, at the Hotel Chieftain, in Council Bluffs.

Mr. and Mrs. Dick Walters were guests of the group, and after dinner, Mr. Walters spoke on music appreciation. At the business meeting which was held following the program, it was decided that next fall a rummage sale shall be held to procure funds for a worthy project, with Mrs. Donald Hirst in charge.

Plans were made for a musical program to be followed by card games for the women guests at the Medical Seminar which will be held in Council Bluffs on May 17, 1954.

It was announced that two dolls had been dressed in the uniforms of graduate nurses of the Jennie Edmundson Hospital and Mercy Hospital schools of nursing and sent for display to the Iowa State Medical Convention in Des Moines on April 26-28, 1954. Mrs. Isaac Sternhill and Mrs. Lee Martin will represent the Pottawattamie County organization at the state convention.

In place of a regular monthly meeting, the Pottawattamie County Auxiliary met in conjunction with the Iowa-Nebraska Medical Assembly Symposium on May 17, 1954, at Hotel Chieftain, Council Bluffs, Iowa. Following dinner, a varied musical program was presented for the ladies, after which they played bridge.

MRS. W. CLARK GILES

Wapello

The Wapello County Auxiliary met for luncheon at the Ottumwa Country Club on May 4. Re-

ports of the State Meeting were given and a total of \$150.00 was earned from the corsages made by Mrs. Walker and sold at the convention. The money was given to the American Medical Education Foundation Fund. On display, for the benefit of those who had not seen it, was the poster made by Mrs. L. A. Taylor which won first prize at the convention.

Arrangements were made and members were appointed to assist at our annual nurses' tea, which will be held May 11 at the Ottumwa Hospital. Mrs. Herbert Wormhoudt will be in charge. It was voted that a Future Nurses Club should be one of our projects. Mrs. C. Ray Phelps will head this committee. Plans were made to hold the summer picnic at the home of Mrs. Wilson C. Wolfe.

MRS. W. D. MAXIER

A GOOD AUXILIARY IS YOU

"Are YOU an active member, the kind that would be missed?

Or, are YOU just content that YOUR name is on the list?

Do YOU attend the meetings and mingle with the flock?

Or, do YOU stay at home and criticize and knock?

Do YOU take an active part to help our cause along?

Or, are YOU satisfied to be the kind that just belongs?

Do YOU ever go to visit a member who is sick?

Or, do YOU leave the work just to the few, and then talk about the clique?

The auxiliary has quite a program scheduled, that I am sure YOU have heard about,

And it is YOUR duty to come and help out.

Come to the meetings regularly and help with heart and hand,

Don't be just a member; take an active stand.

Think this over, members; YOU know the right from the wrong,

Be an active member, do not just belong."

Which are YOU?

What would the auxiliary do, if every member was just like YOU?

The auxiliary is made up of individuals—the individual is YOU.

SPEAKERS' BUREAU RADIO SCHEDULE

WOI—Thursday at 11:15 a.m.

"TRAIN UP A CHILD"

July 1 The Child and Money

July 8 Unusual Behavior and Physical Defects

July 15 Phantasies and Fibs

July 22 The Aggressive Child

July 29 The Over-submissive Child

WSUI—Tuesday at 11:45 a. m.

"TIME OUT"

July 6 Work

July 13 Clothing

July 20 Food

July 27 Prompt Care

COUNTY SOCIETIES

SCOTT COUNTY SOCIETY'S EXHIBIT AT HEALTH FAIR



The exhibit of the Scott County Medical Society in the second annual Health Fair will again be given over to the Scott County Blood Bank which it directs and manages. The Blood Bank will again offer free Blood Group typing and Rh Factor determinations as its part in the Health Fair. There will also be present in the booth one of the Blood Bank Committee members to answer questions. We hope there will be many to avail themselves of this service.

The Scott County Blood Bank is a non-profit, but self-supporting organization within the Scott County Medical Society, and is one of the contributions to the health of this community by this group. The sole purpose of the Bank is to supply whole blood for the needs of patients in the local hospitals.

In June, 1947, the Scott County Veterans' Council supplied the necessary funds for equipment and supplies needed for the operation of a blood bank. More than a score of members of local veterans' organizations donated a pint of blood each, and the necessary work was done by a committee from

the Scott County Medical Society. The Scott County Blood Bank was then in operation.

For the past seven years this blood bank has been quietly functioning. In this time more than 10,000 pints of blood have been used by this community. The initial advance by the Scott County Veterans' Council has since been repaid from the nominal charge made for the blood, and this blood bank remains self-supporting on a non-profit basis.

The value of a local blood bank is known best by those who have required transfusion in an emergency. Since the Scott County Blood Bank operates under a system of voluntary replacement by close friends and relatives, rather than by public recruitment of donors, it has not been the policy of the organization to undertake any extensive publicity program.

During the past year, the Scott County Blood Bank has been aided by the institution of an Auxiliary. A group of interested wives of members are now giving their time to aid in the comfort of blood donors. Their services have become quite valuable.

MEETINGS

Black Hawk

At the meeting of the Black Hawk County Medical Society held on June 15, Dr. Edwin Ernst, of St. Louis, Missouri, spoke on cancer of the uterus and uterine cervix.

Cass

Seventy-four doctors and their wives registered for the Cass County Medical Society's annual meeting at the Atlantic Golf and Country Club on May 26. Speakers who participated in the evening medical program were: Dr. John Lutton and Dr. Archie O'Donoghue, of Sioux City, Dr. R. R. Tidrick and Dr. Christian Radcliff, of S.U.I., and Dr. John Thomas and Dr. H. B. Hunt, of the Nebraska University School of Medicine.

Des Moines

The Des Moines County Medical Society held its annual stag picnic and skeet shoot at New Crystal Lake, on June 9.

Dubuque

At the May 11 meeting of the Dubuque County Medical Society, Dr. F. H. Top, head of the Department of Hygiene and Preventive Medicine at S.U.I., spoke on poliomyelitis prophylaxis.

Johnson

The June meeting of the Johnson County Medical Society was a picnic, held at the home of Dr. George C. Albright, on June 2.

Linn

Dr. C. H. Stark, of Cedar Rapids, was installed as president of the Linn County Medical Society, at a meeting held in mid-May. Dr. Lawrence J. Halpin was named president-elect; Dr. E. B. McConkie was elected vice-president; Dr. Robert C. Locher was elected secretary; and Dr. A. F. Harrington was reelected treasurer.

Washington

Dr. Norman B. Nelson, Dean of the College of Medicine at S.U.I., and Mrs. Nelson, addressed a dinner meeting attended by Washington County physicians, their wives and their guests, on May 28. A framed certificate, announcing the granting of Life Membership in the Iowa State Medical Society, was presented to Dr. W. S. Kyle.

Woodbury

At the meeting of the Woodbury County Medical Society held on May 27, a motion picture

"Radio Isotopes and Their Application to Humans" was shown.

DEATHS

Dr. Matt Blakely Weir, 71, who practiced at Griswold from 1918 to 1949 and since then has practiced part-time at Atlantic, died on May 24 at Jennie Edmondson Memorial Hospital, in Council Bluffs. Dr. Weir suffered two strokes this spring, the first of them while vacationing in Florida.

Dr. Thomas Francis Duhigg, 76, who practiced in Des Moines prior to 1922 and maintained his membership in the Iowa State Medical Society until 1932, died late in May. Following his retirement from the Navy, with the rank of Commander, he has lived in New York City, and he was buried at Arlington National Cemetery.

Dr. William Oscar Smouse, 78, who retired in 1946 after practicing for many years in Des Moines, died at Iowa Lutheran Hospital there, on May 21, after a five-year illness. He was a Life Member of the Iowa State Medical Society.

Dr. Arthur S. Fourt, 59, of Melbourne, died suddenly on June 6 of a dissecting aneurysm of the aorta. As a memorial to him, the doctors of Marshall County will redecorate one of the obstetrical rooms at the hospital where he worked.

BOOK REVIEWS

(Continued from page 307)

ready reference when a problem arises. This is such a book. It is a large book, too, because the authors have prepared a thorough discussion of all the endocrine glands in an orderly fashion; yet they have done a commendable job in avoiding lengthy presentations of controversial topics. The reader finishes each section with a clear concept of the present knowledge regarding that particular gland and its relationship to the others.

The reader is kept oriented by the logical repetition of subheadings, Anatomy and Physiology, Hypofunction and Hyperfunction, in the sections, each of which is devoted to one gland. Then, there are two unusual sections of related interest, both venturing farther than most such texts. The first concerns the placenta and its hormones, and the other considers the endocrine aspects of obesity. The last chapter in the book describes laboratory procedures useful in studying endocrinological problems, with a paragraph to aid in the interpretation of each test. Several tables at the end furnish lists of the effective preparations available for therapy.

This book is so well written, so logically presented, so authoritatively documented, that it is highly recommended for easy reading and for the reference shelf of all physicians who encounter disorders of the endocrine glands.

A. G. Lueck, M.D.

MINUTES OF THE 1954 SESSIONS OF THE HOUSE OF DELEGATES

Iowa State Medical Society

Des Moines, Iowa—April 25-28, 1954

The first session of the House of Delegates of the Iowa State Medical Society was called to order at 2 P.M., Sunday, April 25, by Dr. Herman Smith, Des Moines, Speaker. Roll call was taken by delegate registration cards. There were 107 delegates and 14 alternates present.

SUNDAY AFTERNOON SESSION

APRIL 25, 1954

DELEGATES

Adair—A. S. Bowers	Johnson—W. Kirkendall
Adams—A. W. Brunk	Johnson—E. W. Paulus
Audubon—H. K. Merselis	Johnson—E. F. Van Epps
Benton—J. E. Blumgren	Jones—T. M. Redmond
Black Hawk—H. A. Bender	Kossuth—J. M. Schutter
Black Hawk—C. D. Ellyson	Lee—L. C. Pumphrey
Black Hawk—T. L. Trunnell	Linn—J. J. Keith
Boone—W. H. Longworth	Linn—John Parke
Buchanan—R. L. Knipfer	Linn—C. H. Stark
Buena Vista—H. E. Farnsworth	Linn—J. J. Redmond
Calhoun—Paul Ferguson	Louisa—L. E. Weber
Carroll—J. M. Tierney	Lucas—A. L. Yocom
Cerro Gordo—H. G. Marinos	Madison—I. K. Sayre
Cherokee—D. C. Koser	Mahaska—K. M. Lemon
Chickasaw—M. J. McGrane	Marshall—D. D. Harris
Clarke—H. E. Stroy	Marshall—L. O. Goodman
Clayton—P. R. V. Hommel	Montgomery—E. L. Croxdale
Clinton—R. T. Lenaghan	Muscatine—L. H. Whitmer
Clinton—R. F. Luse	O'Brien—T. D. Kas
Crawford—J. M. Hennessey	Page—P. L. Spencer
Dallas-Guthrie—W. A. Castles	Palo Alto—G. H. Keeney
Davis—P. T. Meyers	Plymouth—W. L. Downing
Delaware—J. E. Tyrrell	Pocahontas—J. B. Thielen
Des Moines—W. R. Lee	Polk—W. D. Abbott
Des Moines—F. G. Ober	Polk—M. T. Bates
Dubuque—D. C. Conzett	Polk—R. F. Birge
Dubuque—R. J. McNamara	Polk—T. A. Bond
Dubuque—D. F. Ward	Polk—R. A. Dornier
Emmet—J. L. Powers	Polk—O. A. Elliott
Fayette—L. W. Ward	Polk—J. T. McMillan
Fremont—Kenneth Murchison	Polk—G. E. Mountain
Grundy—H. V. Kahler	Polk—Fred Sternagel
Hamilton—F. F. Hall	Polk—D. C. Wirtz
Hancock-Winnebago—C. V. Hamilton	Pottawattamie—C. V. Edwards
Hardin—L. F. Parker	Pottawattamie—N. D. West
Henry—J. S. Jackson	Ringgold—E. J. Watson
Howard—W. G. Doss	Sac—W. I. Evans
Ida—W. G. McAllister	Scott—George Braunlich
Iowa—C. F. Watts	Scott—W. C. Goenne
Jackson—L. B. Williams	Scott—L. V. Schroeder
Jasper—J. W. Billingsley	Scott—J. H. Sunderbruch
Jefferson—R. A. McGuire	Shelby—J. H. Spearing
Johnson—E. J. Boyd	Sioux—M. O. Larson
Johnson—W. H. Flocks	Story—J. D. Conner
Johnson—L. H. Jacques	Story—G. E. McFarland, Jr.
	Tama—C. W. Maplethorpe, Sr.
	Union—H. J. Peggs
	Van Buren—L. A. Coffin
	Wapello—C. A. Henry
	Wapello—W. C. Wolfe
	Warren—L. E. Hooper
	Washington—D. G. Sattler
	Wayne—C. N. Hyatt
	Webster—C. J. Baker
	Webster—H. H. Allen
	Winneshiek—E. F. Hagen
	Woodbury—W. K. Hicks

Woodbury—E. M. Honke
 Woodbury—A. Q. Johnson
 Woodbury—F. D. McCarthy
 Woodbury—R. C. Muga
 Wright—G. E. Schnug

ALTERNATE DELEGATES

Appanoose—E. A. Larsen
 Black Hawk—C. E. Manthey
 Cerro Gordo—T. E. Davidson
 Dickinson—T. L. Ward
 Humboldt—I. H. Shohet
 Johnson—J. S. Greenleaf
 Johnson—S. C. Ware
 Linn—E. H. Files
 Marion—D. A. Mater
 Polk—W. M. Sproul
 Pottawattamie—J. W. Standeven
 Poweshiek—E. S. Korfmacher

Minutes of the Wednesday morning, session, 1953, were approved as published in the July issue of the JOURNAL of the Iowa State Medical Society.

At this point in the deliberations, Dr. R. N. Larimer, president, assumed the rostrum and called for remarks of the Speaker of the House. The Speaker outlined procedures to be followed by the members of the House in presenting reports, resolutions, etc. He requested permission to appoint reference committees, which request was granted. Seven reference committees were selected from the personnel of the House of Delegates. *Articles of Incorporation and By-Laws*: E. J. Boyd, Iowa City, Chairman; G. E. McFarland, Jr., Ames; J. E. Tyrrell, Manchester. *Legislation and Public Relations*: D. F. Ward, Dubuque, Chairman; C. D. Ellyson, Waterloo; C. O. Adams, Mason City; P. L. Spencer, Essex; E. H. Files, Cedar Rapids. *Insurance and Medical Service*: L. O. Goodman, Marshalltown, Chairman; C. J. Baker, Fort Dodge; J. H. Sunderbruch, Davenport; C. N. Hyatt, Humeston; C. H. Stark, Cedar Rapids. *Osteopathic*: E. F. Van Epps, Iowa City, Chairman; C. A. Boice, Washington; J. M. Schutter, Algona; J. S. Jackson, Mount Pleasant; R. J. McNamara, Dubuque. *Miscellaneous Business*: C. V. Edwards, Council Bluffs, Chairman; H. E. Farnsworth, Storm Lake; A. Q. Johnson, Sioux City; J. L. Powers, Estherville; O. A. Elliott, Des Moines. *Reports of Officers*: J. G. Fellows, Ames, Chairman; M. T. Bates, Des Moines; L. H. Whitmer, Muscatine; D. C. Koser, Cherokee; R. L. Knipfer, Jesup. *General Practitioners Award*: F. D. McCarthy, Sioux City, Chairman; L. E. Hooper, Indianola; T. D. Kas, Sutherland.

William R. Myers, Henry R. Mol, Robert A. Sedlacek, and Edward R. Duffie, representatives of the Student AMA chapter of the State University of Iowa College of Medicine, were introduced to the members of the House. These students were guests of the Iowa State Medical Society.

Officers' and committees' reports were accepted as printed in the official Delegates' Handbook, and as reprinted hereafter.

Help your central office to maintain an accurate mailing list. Send your change of address promptly to the Journal, 529-36th Street, Des Moines 12, Iowa.

Reports of Officers

FROM THE OFFICE OF THE SECRETARY

The activity of your Society is constantly expanding, which we believe is desirable. Much of this is due to the increasing number of young physicians who are taking an active interest in Medical Society affairs. Most of the committees were busy this past year, and we hope to maintain a comparable tempo during the remainder of 1954.

The business of the State Society has grown to a point where it has become necessary to departmentalize the office. The following departments have been set up.

1. Membership, Accounting, Woman's Auxiliary
(We have installed a new membership record system which has made our membership record keeping easier and far more complete.)
2. JOURNAL and Research
3. Television, Radio and Speakers' Bureau
(This department also prepares farm health article which appear in WALLACE'S FARMER every two weeks.)

We now employ eight people. There are the Assistant to the President, the Executive Secretary, three department heads, two private secretaries and one administrative typist. General public relations, inter-professional relations, and contacts with other organizations are handled through the offices of the Assistant to the President and the Executive Secretary.

There are many activities of the Society which require a great deal of time and personal attention. A few examples are relations with all of the press services, liaison between the two Blue Cross Plans and Blue Shield, legislation, and physician placement, plus constant work with all of the committees of the Society.

We have now been situated in our new offices long enough to feel quite at home. The office is equipped with the modern machinery which is necessary for us to handle the mailings and other correspondence which go to you from this office. We should like to encourage you to visit the new building whenever you are in Des Moines and especially while you are here attending the annual meeting.

Special Note: We urge you to give attention to all communications which come to your office from the State Medical Society and also to read the JOURNAL each month in order to keep abreast of the business of the State Medical Society.

Financial Statement:

All funds due to the State Society have been collected by the secretary and turned over to the treasurer, and all AMA dues have been remitted to the American Medical Association.

Memberships:

Membership in the Iowa State Medical Society during 1953 reached a total of 2481, as compared with 2490 in 1952, a loss of nine members. Forty-three counties had 100 per cent membership, as compared with 55 in 1952. The drop in the number of counties maintaining 100 per cent was due to new doctors' locating in Iowa late in the year who deferred their State Society membership until the first of the year. Our records indicated 30 more eligible non-members

during 1953 than in 1952. There were 59 ineligible physicians in 1953, as contrasted with 44 in 1952. This increase of ineligible physicians was due to the addition of 15 D. P. physicians at institutions. There were 134 physicians retired or not in practice in 1953, as against 142 in 1952. Total membership percentage in 1953 was 96 per cent, one point off 1952. The following counties attained 100 per cent membership during 1953.

Adams	Dickinson	Lee	Ringgold
Boone	Emmet	Lyon	Shelby
Buena Vista	Floyd	Madison	Tama
Butler	Grundy	Mahaska	Taylor
Calhoun	Hamilton	Marion	Van Buren
Carroll	Hardin	Monroe	Warren
Cass	Henry	Muscatine	Wayne
Chickasaw	Humboldt	O'Brien	Webster
Clarke	Ida	Osceola	Worth
Dallas-Guthrie	Jackson	Page	Wright
Delaware	Kossuth	Pocahontas	

AMA Membership:

The State Society has continued to collect dues for the American Medical Association. Our percentage of membership has remained high. During 1953, 2395 Iowa doctors were members of the AMA, a number which was 96.5 per cent of the total Iowa State Medical Society membership. Our membership of 2395 in the American Medical Association entitles the Iowa State Medical Society to three AMA delegates in 1954.

We have continued to serve as a clearing house for physicians who desire to substitute some other AMA publication in place of the AMA Journal.

1953 MEMBERSHIP RECORD

County	Not in Practice				Pctge.
	Members	Eligible	Ineligible or Retired		
Adair	4	3	..	..	57
Adams	4	..	..	..	100
Allamakee	8	1	..	1	89
Appanoose	13	3	..	..	81
Audubon	5	1	..	..	83
Benton	17	2	..	..	89
Black Hawk	101	2	1	..	98
Boone	21	..	..	..	100
Bremer	17	1	..	..	94
Buchanan	11	..	6	..	100
Buena Vista	21	1	..	..	95
Butler	10	..	..	..	100
Calhoun	19	..	..	..	100
Carroll	24	..	1	1	100
Cass	16	..	1	1	100
Cedar	7	1	..	..	88
Cerro Gordo	61	1	..	..	99
Cherokee	13	1	6	4	93
Chickasaw	12	..	..	..	100
Clarke	6	..	..	..	100
Clay	11	1	..	1	92
Clayton	10	6	..	4	63
Clinton	47	2	2	..	96
Crawford	10	1	..	2	91
Dallas-Guthrie	26	..	5	2	100
Davis	13	1	..	..	93
Decatur	6	1	..	1	86
Delaware	10	..	1	1	100
Des Moines	42	1	..	4	98
Dickinson	7	..	..	..	100
Dubuque	72	3	..	1	96
Emmet	15	..	..	..	100
Fayette	23	4	..	2	85
Floyd	17	..	..	1	100
Franklin	8	3	..	..	73
Fremont	8	1	..	1	88
Greene	19	1	1	1	95
Grundy	16	..	..	..	100
Hamilton	13	..	1	..	100
Hancock	..	..	..	..	..
Winnebago	18	4	..	2	82
Hardin	20	..	1	3	100
Harrison	9	5	1	1	64
Henry	12	..	..	3	100

Howard	7	1	..	..	88
Humboldt	9	..	..	..	100
Ida	9	..	..	1	100
Iowa	11	1	..	1	92
Jackson	13	..	..	..	100
Jasper	20	5	..	1	80
Jefferson	7	1	..	1	88
Johnson	202	3	4	12	99
Jones	11	4	..	..	73
Keokuk	10	2	1	2	83
Kossuth	15	..	2	2	100
Lee	35	..	..	..	100
Linn	118	5	1	6	96
Louisa	4	2	..	..	67
Lucas	8	..	..	..	100
Lyon	5	..	..	..	100
Madison	8	..	..	..	100
Mahaska	19	..	..	..	100
Marion	20	3	..	2	87
Marshall	38	1	..	2	97
Mills	5	2	3	..	73
Mitchell	11	4	..	2	73
Monona	11	1	..	2	92
Monroe	7	..	..	1	100
Montgomery	16	2	..	..	89
Muscatine	18	..	2	..	100
O'Brien	18	..	..	..	100
Osceola	8	..	..	1	100
Page	25	..	5	..	100
Palo Alto	15	2	..	..	89
Plymouth	11	3	..	4	79
Pocahontas	7	..	1	1	100
Polk	327	5	3	24	98
Pottawattamie	68	2	2	4	97
Poweshiek	14	1	..	..	93
Ringgold	4	..	..	..	100
Sac	11	1	..	..	92
Scott	105	2	2	7	98
Shelby	7	..	..	1	100
Sioux	15	1	..	..	94
Story	41	1	1	3	98
Tama	14	..	..	..	100
Taylor	5	..	..	..	100
Union	16	1	..	..	94
Van Buren	6	..	1	1	100
Wapello	55	1	1	..	98
Warren	8	..	..	1	100
Washington	16	1	..	1	94
Wayne	7	..	..	1	100
Webster	57	..	..	1	100
Winneshek	10	2	..	2	83
Woodbury	126	1	3	7	99
Worth	4	..	..	..	100
Wright	22	..	..	3	100

Total 2481 112 59 134 96

Since we were unable to rent the Midtown Roller Rink this year and since there was no other space near the Fort Des Moines Hotel where we could display the scientific exhibits, it was the feeling of the officers of the Society and the Committee on Scientific Work that we should dispense with the scientific exhibits this year. It is our hope that the Des Moines Auditorium will be completed by the spring of 1955, which will make it possible for both the technical and the scientific exhibits to be displayed at one central location. The Midtown Roller Rink is the property of the Central Broadcasting Company and the work of remodeling the rink into a television studio has begun. This is the reason we were unable to obtain it for use in housing our scientific exhibits. We are indeed hopeful that the Des Moines Auditorium will be completed and available for the Society's use next spring.

A. B. PHILLIPS, M.D., *Secretary.*

REPORT OF THE TREASURER

During the past year, complete new bookkeeping and accounting systems were introduced which simplify all transactions in the office and provide a monthly statement that gives a clear picture to the Board of Trustees and Council. Audits by our Certified Public Accountant have also been considerably facilitated.

Our new financial statement, we believe, is far more

revealing and more easily interpreted than the old ones, but the streamlining has necessitated some changes that need a bit of explanation. In the past, salaries and expenses of various members of the staff were charged against different activities and departments, and were not shown in the financial statement under the heading "General Salaries." According to the new system, all salaries are charged against the general-salary account.

Expenses in connection with other business of the Society, such as committee meetings, public relations, television, etc., are charged against the respective committees or types of activity.

Any member of the Society is welcome to visit the state office to examine the records at any time.

N. BOYD ANDERSON, M.D., *Treasurer*.

ASSETS:

Current Assets:

Cash in Banks	\$ 7,624.32
Government Bonds	60,000.00
Baldrige-Beye Memorial Fund—Unloaned	1,557.00
Notes Receivable—Baldrige- Beye Fund	4,678.00
Loan-Iowa State Medical Educa- tion Fund	554.63
Pension Insurance due from employees	607.50

Total Current Assets \$ 75,021.45

Fixed Assets:

Land	\$ 5,000.00
Building	36,749.85
Office Furniture and Fixtures ..	12,596.99
Total	\$54,346.84
Less: Depreciation to date	5,368.24

Net Fixed Assets 48,978.60

TOTAL ASSETS \$124,000.05

LIABILITIES AND NET WORTH:

Liabilities:

Withholding Tax	\$ 655.90
Social Security Tax	56.18
Federal Unemployment Tax ...	84.90
Use Tax	85.96
Local Taxes	990.29
Accounts Payable	1,610.00

TOTAL LIABILITIES ... \$ 3,483.23

Baldrige-Beye Memorial Fund

Balance 1/1/53	\$ 4,147.00
Add: Income 1953 ..	2,088.00
Net Worth:	6,235.00

Balance 1/1/53	\$105,311.85
Add: Net Income- 1953	8,969.97
Balance period ending 12/31/53	\$114,281.82

TOTAL LIABILITIES AND
NET WORTH 12/31/53 \$124,000.05

Cash Receipts for the year 1953

Dues—State Society	\$103,496.50
Dues—A M A	48,217.50
Journal Advertising	17,861.61
Journal Reprints	1,178.01

Annual Session	7,520.70
Blue Shield Refund for Services	5,127.00
Miscellaneous	814.84
A M A Collection Commissions	488.75
Interest—Government Bonds	1,258.72
Interest—Savings Account	233.38

TOTAL RECEIPTS \$186,197.01

Expenditures for the year 1953

Annual Session	\$ 9,298.89
Baldrige-Beye Memorial Fund 1953	2,088.00
County Society Services	2,491.99
Council Expense	1,503.16
Committee Expense:	
Grievance	1,640.46
Legislative	10,200.00
Medico-Legal	993.25
Medical Service	1,799.10
Medical Education—Hospitals	200.18
Public Health	1,878.16
Public Relations	3,778.39
Other Committees	1,508.99
Depreciation—Building	915.11
Depreciation—Office Furniture and Fixtures ..	1,768.70
Dues to A M A	48,217.50
Dues and Subscriptions	912.00
General	835.76
Insurance	860.44
Janitor Supplies	73.25
Journal—Printing and Engraving	17,185.84
Legal and Auditing	297.65
Lights, Gas and Water	631.32
Local Taxes	990.29
Office Stationery and Supplies	2,293.79
Pension Insurance	3,706.04
Postage	1,200.37
Repairs and Maintenance of Office Building and Equipment	78.75
Reprints	1,053.27
Salaries	48,389.06
Salaries—Outside Secretarial Service	225.26
Service Contracts—Machines	227.72
Social Security and Unemployment Tax ...	554.97
Speakers Bureau	33.40
Telephone and Telegraph	2,388.71
Travel Expense (Officers)	3,393.82
Travel Expense (Salaried Employees)	1,895.46
Trustee Expense	1,368.91
Use Tax	349.08

TOTAL EXPENDITURES \$177,227.04

REPORT OF THE BOARD OF TRUSTEES

Members of the House of Delegates:

The Board of Trustees has experienced an exceedingly interesting and busy year. We held twelve official meetings and numerous telephone conferences. We have prepared a résumé of the major activities for your review.

In accordance with the wishes of the House of Delegates, the Trustees established a pension plan for the employees of the Iowa State Medical Society. An employee becomes eligible after five years' service and is required to contribute to the plan. At present Miss Mary McCord and Mr. Don Taylor are the employees covered. However, according to federal regulations Mr. I. W. Myers, our legal counsel, will have to be in-

cluded when he becomes eligible in March, 1954.

The streamlining of the Society's accounting system, which we have supervised, is making it easier for us to observe the finances of the Society and has made it possible for us to present a financial statement to you which is illustrative and, we hope, more easily understood than those of past years. You will note in studying the financial statement that the budget of 1954 income and expenses is so nearly at an equilibrium that the dues should remain as they are.

Since the 1953 annual meeting, we have lost the services of Mrs. Dorothy Dolk, Executive Assistant, and Dr. R. D. Bernard, General Manager. Mrs. Dolk gave up her duties at the Society in order to devote full time to her home. Through the years, Mrs. Dolk served the Society very commendably. Dr. Bernard resigned January 1, 1954, after serving for three and one-half years as General Manager. He stated in his letter of resignation that he believed he had accomplished the tasks which were assigned to him when he was employed and, further, that he felt his first duty was to care for Mrs. Bernard. The Trustees accepted his resignation with sincere regret.

Following Dr. Bernard's resignation, we made some changes in staff appointments. We abolished the position of General Manager and established the new post of Assistant to the President, to which Miss McCord was appointed. Mr. Taylor succeeded Miss McCord as Executive Secretary. He is now employed exclusively by the Iowa State Medical Society, having been replaced as Director of Physician Relations for Blue Cross-Blue Shield by Mr. Wilbur R. Quinn, who will maintain liaison between the Medical Society, Blue Shield, and the two Blue Cross plans. This past year Miss McCord was absent from the office four months because of illness, but we are happy to report she has recovered and is performing her duties in the usual efficient manner.

The State Society is extremely fortunate in having Edward Hamilton, Ph.D., as Assistant Editor of the JOURNAL. He is doing an outstanding job for us. By this time all of you should have received the Committee on Medical Services' "Handbook of Resources Available to Physicians," for which Mr. Hamilton accumulated most of the material. We consider it to be one of the outstanding manuals of its kind in the nation, and the sale of a large number of the manuals has greatly reduced the over-all cost of the booklet to the Society.

Mrs. Hazel Lammey, who is the replacement for Mrs. Dolk, is performing her duties in a most efficient manner. Mrs. Lammey handles memberships, accounting, and certain activities for the Woman's Auxiliary.

Miss Tina Preftakes is developing into a finished television producer. Under the direction of Dr. Bernard and Mr. Taylor, Miss Preftakes has produced a television show over WOI-TV every week since last September. She has had to give up every Friday night as well as many other evenings and Sundays in order to produce these shows on a weekly schedule. In addition, she has done the rewrites of the health articles which have appeared in WALLACE'S FARMER. She works with Mr. Taylor and the Committee on Public Education in putting out this material. This farm publication reaches over 200,000 farm families, and one of the State Society's articles appears every two weeks. Miss Preftakes is also in charge of the Speakers' Bureau of the Society, under the direction of Dr. Robert Stickler. We believe this young lady shows real

promise, and we are expecting ever greater things from her.

We would be remiss if we did not acknowledge the outstanding work of our legal counsel, Mr. I. W. (Barney) Myers. He has given unceasingly of his time and has been most helpful to your officers and various committees in legal matters as well as in other and more general problems of the Society. We are grateful to Mr. Myers for his splendid work on behalf of the Iowa State Medical Society.

Without exception, all of the staff members are deserving of praise. A tremendous volume of work has been handled by a very small staff.

A supplemental report will be delivered before the House of Delegates.

L. A. COFFIN, *Chairman*,
J. W. BILLINGSLEY
W. L. DOWNING

Reports of the Councilors

FIRST DISTRICT

A Cancer Clinic for Councilor District One was held at New Hampton on October 21, 1953. It was a very successful and well attended meeting. The councilor has regularly attended meetings held at the State Society's headquarters in Des Moines.

A. F. FRITCHEN, M.D., *Councilor*.

Bremer County. The Bremer County Medical Society held meetings in April, May and December, 1953. Because physicians in the county who are not members of St. Joseph Mercy Hospital's staff hadn't very frequently attended county society meetings in previous years, the 1953 gatherings were permitted to cover both hospital and society business. However, if the other doctors express the wish that they do so, the Waverly men will be glad to have the agenda confined to topics that are of interest to practitioners throughout the area.

F. R. SPARKS, M.D., *Deputy Councilor*.

Chickasaw County. The annual meeting of the Chickasaw County Medical Society was held in New Hampton, Iowa on December 15, 1953. The members present went on record as in favor of the Bricker amendment. They also approved the attitude of the State Medical Society in regard to billing for surgical fees.

The County Society sponsored a "Cancer Clinic" which was held in New Hampton, Iowa, on October 23, 1953. It was well attended and appreciated by all present.

M. J. McGRANE, M.D., *Deputy Councilor*.

Fayette County. The Fayette County Medical Society held monthly scientific meetings during 1953, except for July and August. Speakers were secured to talk on various medical subjects of interest. Our October meeting was held in conjunction with the veterinarians' group in four northeast Iowa counties, and we have voted to make such a joint meeting an annual affair, with the topic for discussion a subject of interest to both groups.

The Society welcomed two new members during the year, both of them general practitioners. Dr. Scott Linge located in Fayette, and Dr. Harold Hallberg, in Oelwein. The new million-dollar addition to Mercy Hospital, Oelwein, and the complete remodeling of the old hospital have provided us a total bed capacity of 72.

A. F. GRANDINETTI, M.D., *Deputy Councilor*.

Howard County. All eligible practicing physicians in Howard County are members of the Society. During 1953, two physicians from Cresco entered military service, and two new men opened offices in the county, one at Elma and one at Cresco. The Society held its annual meeting in December, and no special activities were planned for 1954.

P. A. NIERLING, M.D., *Deputy Councilor.*

Mitchell County. The Mitchell County Medical Society held nine monthly meetings during 1953, and attendance at them averaged 80 per cent. There were no outside speakers, and the proceedings were mostly of a business nature.

T. E. BLONG, M.D., *Deputy Councilor.*

Winneshiek County. The Winneshiek County Medical Society held only one separate meeting during 1953, its annual election meeting in December. All members of the Society meet monthly with the Decorah Hospital staff, and because of the small membership in the Society, it is impossible to arrange formal sessions throughout the year. Many of the Winneshiek County physicians have attended medical conventions and post-graduate courses, as well as the meetings of the State Society and the Iowa Academy of General Practice.

EDWARD F. HAGEN, M.D., *Deputy Councilor.*

SECOND DISTRICT

Activity in the Second Councilor District has gone along about the same as it has in the past. It seems as though gradually the amount of activity by the various county medical societies slowly increases. It is heartening to see the interest shown by the doctors of this District in the problems confronting organized medicine, and to see their willingness to do whatever possible to solve them.

C. O. ADAMS, M.D., *Councilor.*

Butler County. In Butler County the Society activity is limited to two meetings a year. During the summer-time a meeting is held to which the doctors' wives are invited, and the problems confronting the doctors of the county are discussed in an informal manner. A second meeting is held in December to take care of the annual routine business. Activity in this Society is limited because of the small number of doctors in the county and because of the fact that their professional interests are quite divergent, depending on their proximity to larger medical centers.

F. A. ROLFS, M.D., *Deputy Councilor.*

Cerro Gordo County. The Cerro Gordo County Medical Society held nine dinner meetings during the year 1953. The regular meetings are suspended during the months of June, July, and August. Attendance averages about 45 members and 10 guests at each meeting. Guest speakers are present for all of them. In September the doctors' wives were also present.

Most of the business of the Society is carried on by the Executive Council, which meets each month at noon on the day of the medical meeting.

In the fall of 1953, the local Society for Crippled Children set up a physiotherapy treatment center at Hoover School, one of the new elementary school buildings in Mason City. There is a full-time physiotherapist in charge who gives treatment to those who need it, but only under the specific recommenda-

tions of the patient's physician. The County Medical Society gave advice and cooperation in setting up this treatment center.

A free diabetic urine examination day was held, and a total of 67 urines were examined. No new cases were found.

Approval was secured from the Atomic Energy Commission on January 9, 1954, and an isotope laboratory has been established by the Cerro Gordo County Medical Society. The equipment is owned by the Cerro Gordo County Medical Society and is housed at the St. Joseph Mercy Hospital. Operation is in the hands of a committee of the County Medical Society. In the beginning, iodine for diagnosis only will be used. Later it is hoped that therapeutic iodine and radioactive phosphorus and possibly gold will be added to the work of the laboratory.

During the year, membership in the County Society was decreased by the death of Dr. George Crabb. One man returned to his practice after spending time in military service, and another man left his practice to serve in the armed forces. Two new members were added by transfer of membership, and two new members were added to the rolls during the year. One member moved to another state.

L. R. WOODWARD, M.D., *Deputy Councilor.*

Franklin County. In Franklin County only one or two meetings are held each year. All members of the county society, however, attend monthly meetings of the hospital staff, and many of them visit surrounding counties to take advantage of the imported speakers.

During the year the Society voted to encourage the securing of a county nurse.

W. L. RANDALL, M.D., *Deputy Councilor.*

Winnebago-Hancock Society. The Winnebago-Hancock Society held four quarterly meetings during the year, and the attendance was very good. During the year two new men have located in the area and have been admitted to membership in this Society. One man was recalled to active duty in the Naval Reserve. Many of the members also attend the monthly meetings of the Cerro Gordo County Society.

T. J. IRISH, M.D., *Deputy Councilor.*

Humboldt County. In Humboldt County, formal organized meetings have been very few. The doctors attend hospital-staff and county-society meetings in adjacent counties. The doctors in the county have cooperated with the county health nurse and the school nurses in a county wide exam and immunization program for five-year-olds prior to their entrance into school.

I. T. SCHULTZ, M.D., *Deputy Councilor.*

Kossuth County. The Kossuth County Medical Society is quite an active organization. It holds monthly meetings the year around, in conjunction with the monthly hospital meetings in Algona.

Changes in the membership during the year include the death of Dr. L. O. Snook of Wesley and the return of Dr. Horton to his practice again after a year of service with the Navy. During the year the Kossuth County Society cooperated with the tuberculosis survey, in which 11,803 miniature films were taken. Seventy-nine retakes were also examined.

There is a health council in the community, and a member of the county society sits in as one of the members of this council.

The doctors of this Society have cooperated in a survey of all preschool children.

During the fall, a Crippled Children's Clinic was held, in which the County Society doctors cooperated.

The County Society cooperated with the Diabetic Society's program for free examination of urine for sugar.

The school boards in this area have a health council in which two members of the medical society are members to help with counseling on the health of school children.

Kossuth County is a 100 per cent society, for all doctors eligible for membership in the county are members of the society.

M. G. BOURNE, M.D., *Deputy Councilor*.

Worth County. The Worth County Medical Society has limited activity because of the very small number of doctors in the county. Only organizational meetings are held. Most of the men visit the Cerro Gordo County Medical Society's monthly meetings to participate in their scientific sessions.

R. L. OLSON, M.D., *Deputy Councilor*.

Wright County. The Wright County Medical Society held four meetings during the year. There are 20 practicing physicians in the county, 19 of whom are active members of the Society. During the year there were no new physicians entering practice in the county. One of the men who is on active duty with the Army is expected to return to his practice in Clarion in the spring. There are no other physicians in the Armed Services at present. There have been no deaths among the members during the year.

In the fall of the year an immunization program was carried out among the school students with almost 100 per cent student participation.

The meetings of the society are held in various towns in the county and six meetings are planned for the year of 1954.

S. P. LEINBACH, M.D., *Deputy Councilor*.

THIRD DISTRICT

The third councilor district, with Dr. M. T. Morton of Estherville, as councilor, has been having a very satisfactory year.

There are adequate hospital beds to give the patients good medical care.

For the most part there has been harmony between the doctors, the hospitals and their staffs.

In April, 1953, Dr. Morton suffered a heart attack, because of this he resigned, and a new councilor was elected in December.

The new councilor has been unable to get reports from the Deputy Councilors in all counties. However, Emmet, Osceola and Pocahontas Counties have had regular meetings each month. Dickinson, Lyon, Palo Alto and Sioux Counties have had meetings for special occasions, as for election of officers, meeting with representatives of Blue Cross and Blue Shield, and special local problems.

The Woman's Auxiliary is not active in this District. The membership is small in all the counties, and there is no large city in the district for any social activities.

All counties have reported 100 per cent membership of eligible doctors to the state society.

T. L. WARD, M.D., *Councilor*.

Deputy Councilors

C. S. Kirkegaard	Emmet County
Stuart H. Cook	Lyon County
F. M. Rizzo	Osceola County
Chas. L. Jones	Pocahontas County
Harold L. Brereton	Palo Alto County
C. B. Murphy	Sioux County
C. C. Jones	Clay County
T. D. Kas	O'Brien County

FOURTH DISTRICT

The activities of the fourth district councilor have been confined to attendance at meetings of the Executive Council in Des Moines, reports of these meetings being sent to each county.

The problems of the individual counties in the district have been substantially the same as those of the State Society. One county (Buena Vista) has incorporated, in keeping with the advice of the House of Delegates.

The hospital-osteopathic problem so prominent in some sections of the state has been noticeably absent in this district this year. One rather new community hospital revised its by-laws just recently, revoking hospital privileges previously given osteopaths. This is not a tax supported hospital.

The following individual county reports are self-explanatory and give a very good idea of the Fourth District situation.

PAUL W. BRECHER, M.D., *Councilor*.

Buena Vista County. Probably the most important of the events in the Buena Vista County Medical Society during 1953 has been its becoming incorporated. This procedure is in keeping with the advice and suggestions as set out by the A.M.A. and the Iowa State Medical Society. We feel it will make for a better working organization. Of the 18 physicians in Buena Vista County, 16 are members of the County Society. One new physician has located in the County during the year, one member has left for another state, one member has not been active, and one member has died during the year.

Our Society had five meetings during the year. The December meeting included the annual election of officers, and the other meetings were of a social and business nature. One meeting is customarily held in conjunction with the staff of Buena Vista County Hospital. This is a summer picnic-type of meeting, with golf, boating, etc. in the afternoon, and a dinner in the evening with guest speakers. Invitations are sent to the surrounding counties, and some 30 to 40 usually attend. The Society has been active in all measures backed by the State Society and the State Department of Health, such as disease prevention, immunization programs, polio control, etc.

H. E. FARNSWORTH, M.D., *Deputy Councilor*.

Carroll County. The active membership of the Carroll County Medical Society was increased from 19 to 20 during the past year by the inclusion of Wm. C. Mulry, M.D., A.C.R., who now is in charge of radiology at St. Anthony's Hospital, Carroll. The facilities of the St. Anthony Hospital X-Ray Department were recently expanded to include deep X-Ray therapy. A room adjacent to the one that formerly housed the Department was completely converted, shielded, and equipped with a 250KV, 15MA therapy

unit. Radium therapy is available there through the use of rental radium.

In 1953, the delivery rooms and nursery at St. Anthony's were remodeled and improved. That section of the hospital is an especially busy one, for there were 761 babies born and cared for there during the year.

The practice of Dr. D. H. Hopkins in Glidden, Iowa, was purchased by the Morrison Clinic, of Carroll, on June 1, 1953. Dr. Hopkins retired.

J. R. MARTIN, M.D., *Deputy Councilor*.

Cherokee County. The Cherokee County Medical Society held monthly meetings during all of 1953. Scientific papers were given by members of the County Society and clinico-pathological conferences were conducted by Dr. Ellsworth, of the Soo Valley Hospital staff.

On Thursday, May 28, our annual meeting of the Sioux Valley Medical Society was held, to which all doctors of the surrounding territory were invited. We had a large attendance. Our guest speakers were Dr. Hardin of the Dept. Internal Medicine and Dr. Keettel of the Dept. of Obstetrics of the State University of Iowa.

C. E. BRODERICK, M.D., *Deputy Councilor*.

Crawford County. During 1953, the Crawford County Medical Society held monthly meetings, with visiting speakers to provide the scientific programs. The membership remained constant with the exception that Dr. Garred, of Dow City, left for service with the Army.

The immunization program sponsored by the Society was continued, and a donation of \$500 was made to the Filter Fund for the local swimming pool. Members of the Society talked to various lay and medical groups on medical subjects.

A visiting pathologist and a visiting radiologist have been secured for the local hospital.

R. M. JOHNSON, M.D., *Deputy Councilor*.

Ida County. Ida County has had no scientific meetings during 1953, though it has had one business meeting.

Two doctors of medicine have located in the county during the year: Dr. J. E. Fitzpatrick and Dr. R. E. Underriner, in Holstein. Dr. H. J. Fishman has moved from Holstein to Cherokee, and Dr. R. B. Armstrong has moved out of the state to Arizona.

M. W. GRUBB, M.D., *Deputy Councilor*.

Monona County. There were two meetings of the Monona County Medical Society held during 1953, one for the election of officers and the other to hear talks given by representatives of Blue Cross and Blue Shield. The representatives of those organizations helped us to get a clear understanding of their procedures and their plans. In December, we gave mantoux tests to suspected cases of tuberculosis, and followed up by giving them chest x-rays. A clinic for disabled and crippled children was held during the year.

C. W. YOUNG, M.D., *Deputy Councilor*.

Plymouth County. Meetings of the Plymouth County Medical Society were held monthly in conjunction with staff meetings of the Sacred Heart Hospital, Le Mars, Iowa. All members of the County Society are also members of the staff of the hospital.

Dr. Vernon Weikel, who located at Le Mars July 1, is a new member of the County Society.

At our December meeting, approval and support was voted for the organization of the ladies' Medical Soci-

ety Auxiliary, which is now in the process of being organized.

H. L. VANDER STOEP, M.D., *Deputy Councilor*.

Sac County. We, of the Sac County Medical Society, have had a very good year. Meetings were held every month except August, in 1953, with a scientific paper or report given at each of those meetings. The Crippled Children's Clinic was held in Sac City, Iowa, this year.

One new member was added to the Society, John Hubiak, M.D., associated with James McAllister, M.D., Odebolt, Iowa.

CLIFFORD E. LIERMAN, M.D., *Deputy Councilor*.

Woodbury County. In comparison with the preceding several years, the Woodbury County Medical Society has had a rather mild and quiet year. The county society has had a meeting each month, with the exceptions of July and August. Approximately seven scientific papers have been read and discussed at these meetings, the speakers largely coming from the University of Iowa. The addresses have been well-received, as well as well-presented. Our average attendance has been from 80 to 100. During the year there were several social meetings, in addition.

Woodbury County is very happy to report that it is doing a better job with indigent people since the old age pension plan and A.D.C. were handed back to the county, where it rightly belonged. The members hope that the other counties of the state are experiencing the same good results.

Our hospital situation in Sioux City has been excellent. For the first time in ten years, there has been a bed for everyone.

Woodbury County feels highly honored that the State Society has had as its president, this past year, our own Dr. Bob Larimer, whom we think highly of and whose opinion we respect. There have been several controversies during his term of office which he and his officers have handled well.

DONALD B. BLUME, M.D., *Deputy Councilor*.

FIFTH DISTRICT

I respectfully submit the following Deputy Councilor reports which cover the activities of the various county medical societies in my district.

E. M. KERSTEN, M.D., *Councilor*.

Boone-Story Societies. The Boone-Story County Medical Societies have met together ten times in the last year, each month except July and August, on the third Tuesday of the month. The custom is for the counties to alternate as hosts to the meeting. Dinner is followed by a scientific meeting, when an address is given by a speaker from one of the medical centers of the Midwest. The program committees of the two counties have done well this last year in selecting good speakers. Story County Hospital opened in September, 1951, and has been filled to about 50 per cent or better of capacity this last year, making an admirable contribution to the community health.

JOHN D. CONNER, M.D., *Deputy Councilor*.

Calhoun County. The society meets regularly nine times a year on the first Thursday of the month. We do not meet during the month of the State Society meeting, nor in July and August. Our meetings are dinner meetings, held in rotation at Lake City, Rock-

well City, and Manson. There is always a scientific program. The average attendance is ten.

JOHN H. FAUST, M.D., *Deputy Councilor.*

Greene County. The Greene County Medical Society, consisting of 17 members, meets monthly, excepting June, July and August. These meetings are usually dinner meetings, at which we perform our administrative and business duties as well as enjoy educational and scientific presentations.

We are happy in having a contract with the county board of supervisors by which all of the county indigent funds paid for medical care go into our County Society treasury. This source of revenue underwrites our state and national dues, pays for medical speakers, books and periodicals for the Society library at the Hospital, as well as other medical educational programs of the Medical Society.

We are proud of our county tuberculosis program by which free chest films are provided on written request of the doctor irrespective of the patient's ability to pay. Through this system we have derived much useful diagnostic benefit on our local level.

It is believed therefore that we have made our organization one of usefulness in the community, and through this means our people are enjoying better medical care as the years progress.

ELVIN D. THOMPSON, M.D., *Deputy Councilor.*

Hamilton County. During the past year, the Hamilton County Medical Society has been energetic and alert to the problems confronting organized medicine. The membership includes all of the eligible physicians of the county. There are twelve active members, and there is one "life" member. Regular Society meetings are held on the second Tuesday of each month at the Hamilton County Public Hospital. These are dinner meetings, followed by the business meeting and a scientific program. Case reports and reviews of the literature presented by the members constitute the latter.

The building and remodeling project of the Hamilton County Public Hospital was completed during the year. The capacity was increased to 80 beds and 18 bassinets. The Society was active politically, and has donated liberally of its funds in order to achieve community improvement. In cooperation with the Hospital Board of Trustees, the Society drafted and adopted a charter and by-laws for a hospital staff organization. This was accomplished as a step towards achieving AHA accreditation. Since, as the society is aware, as long as the present Iowa Code does not permit closed staffs in publicly operated hospitals, there will from time to time be an osteopath who will bring in an occasional patient, our objective is to hold this to a minimum, and to continue to elevate the standards of the hospital to a level which will merit accreditation as quickly as the osteopathic situation is resolved.

BRUCE F. HOWAR, M.D., *Deputy Councilor.*

Polk County. The Polk County Medical Society reported 333 members to the State Society in 1953. Of this number 250 are active. At the close of the year, 13 of our members were in military service, including two from active practice. Twenty-six new members, including 16 in active practice, were admitted to our roster, and 41 members, including 5 in active practice, were lost during the year. Death took 6 of these. All

known eligible doctors of medicine residing in the County held membership in the Society or had applications pending at the close of the year.

By agreement with the proper authorities, our members continue to provide care to the indigent patients at Broadlawns Hospital and in their homes. The Society's emergency telephone service assures our community of the services of a physician at any time of the day or night when the family physician cannot be reached.

Six scientific meetings were held during the year, with an average attendance of 110. Programs were provided by outstanding guest speakers at all meetings except in December, when our own members presented the program according to the custom. The ladies were included at our social meeting and the Society and Auxiliary met jointly at a Fall Party. Two meetings of the Iowa Academy of General Practice and two Veterans' Administration Post Graduate Lectures were held during the winter months. Another meeting of office secretaries sponsored by the Blue Cross-Blue Shield was very well attended. The Society has extended its efforts to educate the public about the medical facilities of Polk County through educational pamphlets and newspaper articles.

Our pre-school health program, which has been in effect for several years, reached a peak throughout the entire county in the number of kindergarten children receiving pre-school examinations by their family physicians.

Our Grievance Committee reviewed ten formal complaints during the year. In all instances its solutions or suggested solutions were amicably received by both physician and patient.

Our members continued to support the case-finding program of the Tuberculosis Association, and although qualified approval was given to a proposed fast-tempo tuberculosis survey, Federal budget curtailments caused cancellation of the project.

Our members, also, are actively engaged in the research and educational projects of the Cancer Society. Other members are spearheading the surge for better mental health facilities and understanding in our community. Our committee on poliomyelitis was well prepared to meet another emergency, but fortunately it did not occur. There is increasing evidence of the benefits of a full-time director of the Des Moines and Polk County Health Department.

We believe that there is growing evidence of membership response to both professional and civic responsibilities. Our Society has, at all times, attempted to counsel on health aspects of local programs, and in every way to meet its self-imposed responsibilities to the people of Polk County.

M. T. BATES, M.D., *Deputy Councilor.*

Webster County. During the year 1953, the Webster County Medical Society held monthly business and scientific meetings, with the exception of the two summer months.

This year, for the first time, the Society sponsored a clinic in Fort Dodge by the State Services for Crippled Children.

During the year, with the approval of the State Department of Health and the local county and city health authorities, a committee of the Society completely revamped the quarantine rules and regulations for communicable diseases.

Individually and as a body, members of the County Society, during the year, were active in radio and TV

programs related to health; on many of the committees of the State Medical Society; and in the legislative field.

CHARLES J. BAKER, M.D., *Deputy Councilor.*

SIXTH DISTRICT

From the standpoint of organization, activity in the Sixth District has been limited largely to consideration of two subjects—Fee-splitting and corporate medical practice.

Many of the doctors in the district feel that physicians in Iowa are being crucified by dignitaries holding office in politically select surgical societies. It is the attitude among the profession in this area that much unfavorable lay propaganda is initiated, not by eager lay writers, but rather by a circle of influential non-practicing physicians in organized medicine. No physician can honestly approve fee-splitting in any guise, but the presumption is, and has been, that the method of billing in Iowa encourages the dichotomy of fees and tends to shroud its existence by misrepresentation. No physician in Iowa chooses to blind himself to the existence of this practice, but all physicians feel that airing it in the public press serves to defeat any effort toward enhancing better public relations. Disappointment is felt over the failure of the House of Delegates effectively to curtail the promotion of this propaganda by people holding high office in organized medicine.

The unity and cooperation in Black Hawk County in exposing the potential evils of national corporate medical practice under the title of National Health Service is indeed inspiring. Delegations from Black Hawk County have traveled over much of the state in an effort to acquaint medical groups with the present status of the corporate practice of medicine. Opposition to this movement is in its infancy, and a full story has not yet been told. If this program is not defeated, the failure cannot be blamed upon the Black Hawk County physicians.

In general, medical coverage in the Sixth District is excellent. With the curtailment of military demands on our younger doctors, most communities that can support a physician are provided with adequate medical care, and every patient in this District is within reasonable distance of a physician.

Four physicians are still in Medical Service in the Armed Forces, and the district has had two physicians move out of the area. These are, Richard Munns, M.D., Alden, and H. L. Klemme, M.D., Belle Plaine. The only physician in the District who has formally retired is Dr. A. R. Lynn, of Marshalltown.

New physicians in the area are as follows: Robert Weihrauch, M.D., Waterloo; Robert White, M.D., Waterloo; Robert Bailey, M.D., Waterloo; Joseph Bern, M.D., Waterloo; James Jeffries, M.D., Waterloo; John Sear, M.D., Alden; R. E. Dunn, M.D., Dysart; Martin Deakins, M.D., Vinton; B. M. Byram, M.D., Marengo; L. E. Flink, M.D., Reinbeck; J. R. Jaquis, M.D., Reinbeck; George Caudill, M.D., Newton; M. L. Jones, M.D., Colfax; and John Enggas, M.D., Kellogg.

OTIS D. WOLFE, M.D., *Councilor.*

Deputy Councilors Are:

N. C. Knosp, M.D. Benton
Craig D. Ellyson, M.D. Black Hawk
E. A. Reedholm, M.D. Grundy
L. F. Parker, M.D. Hardin
C. F. Watts, M.D. Iowa
J. W. Ferguson, M.D. Jasper

R. C. Carpenter, M.D. Marshall
S. D. Porter, M.D. Poweshiek
A. J. Havlik, M.D. Tama

SEVENTH DISTRICT

During 1953, I addressed meetings of the Dubuque, Linn, Clinton and Johnson societies, as well as attended meetings held at the State Society headquarters, in Des Moines.

E. F. VAN EPPS, M.D., *Councilor.*

Buchanan County. The Buchanan County Medical Society held twelve meetings during the past year, in conjunction with the staff meetings of People's Hospital, at Independence. They were preceded by a dinner served at noon on the third Wednesday of each month in the hospital dining room.

All eligible physicians are members of the County Society. Average attendance at County Medical Meetings is 80 per cent.

During the past year one physician died. New members are Dr. Jean Mendenhall and Dr. L. D. Kyer, newly appointed superintendent of the Independence Mental Health Institute.

Members of the Society have been active in attending postgraduate courses as well as the scientific programs of neighboring counties. All members have been active in the affairs of People's Hospital, at Independence, especially in the purchase of new equipment. The society has cooperated in the County immunization program and Tuberculosis program, as well as the Red Cross Blood Bank and the Crippled Children's Clinic held at Oelwein.

PAUL J. LEEHEY, M.D., *Deputy Councilor.*

Clinton County. The Clinton County Medical Society had about the usual activities in 1953. We held regular scientific meetings, and sponsored and helped with a clinic for handicapped children. We each served our turn at the Blood Bank, and we sponsored the diabetic detection clinic. The tumor clinic is still active and does very good work. It is well equipped with the usual diagnostic instruments and photographic paraphernalia, and recently purchased a flame photometer for blood chemistry.

During the last year we lost two doctors by death, and five new ones moved in—one pediatrician and general practitioner, one anaesthesiologist, and three internists. An orthopedist is expected in February. In addition, one general practitioner who had moved away temporarily returned to active duty here.

RALPH F. LUSE, M.D., *Deputy Councilor.*

Delaware County. During the past year, the Delaware County Medical Society has had bi-monthly meetings with an out of town guest speaker on a scientific subject at each meeting.

We participated in National Diabetic Detection week; our members carried out an immunization program in the town of Hopkinton, which is without a doctor, and athletic examinations for school athletes were carried out in all towns in the county where it was requested.

R. E. CLARK, M.D., *Deputy Councilor.*

Dubuque County. The Dubuque County Medical Society had a good year. Meetings were held every month except July and August. At most of the meetings, scientific papers were presented, and at several meetings devoted to the organizational part of med-

icine, our Councilor briefed the Society on the structure and organization of the State Society.

The hospitals in Dubuque have undergone a reorganization program with the departmentalization of the respective staffs as outlined by the Joint Commission on Accreditation.

In conjunction with the Dubuque County Dental Society, we again sponsored the Healthiest Boy Contest at the Dubuque Boys' Club and presented the winner with a United States Savings Bond. The annual Essay Contest was sponsored by the County Society, and the winner likewise was presented with a U. S. Savings Bond.

The Woman's Auxiliary has been very active, has held regular meetings, and has conducted the largest sale for the crippled and handicapped ever to be held in this area.

The attendance at other scientific meetings by members of the Society has increased over previous years, and the Society has become more alert to the dangers to organized medicine. We look forward to a better year this year.

D. F. WARD, M.D., *Deputy Councilor.*

Johnson County. The Johnson County Medical Society held ten meetings during the year 1953. At nine of these, scientific programs were presented. These covered a wide variety of scientific subjects. The June meeting was a picnic, at which time the members of the Society were guests of Dr. George C. Albright at his home. Attendance at the meetings varied from 68 to 121.

The total membership of the Society has grown from 207 to 235 in the past year. Increases are shown in all the categories of membership.

Perhaps the most important of the Society's activities during the year was the assistance it gave toward the establishment of the Community Health Unit. Reports on this project were presented at several of the meetings. Committees were appointed to study the matter further, and the Society went on record as favoring the establishment of such a unit. Much of the credit for this activity should be given to Dr. Alson E. Braley, President of the Society, whose deep and sustained interest in the matter stimulated the Society's activity.

E. J. BOYD, M.D., *Deputy Councilor.*

Jones County. The Jones County Medical Society meets three or four times yearly. There are 16 practitioners in our county, 13 of whom hold membership in our County Society. One member joined the Coast Guard during 1953, and three were admitted to membership through transfer from other county societies.

On account of the short distance to Cedar Rapids, most of our members attend the scientific meetings of the Linn County Medical Society.

All members are interested in activities that are of interest to the Medical profession.

T. M. REDMOND, M.D., *Deputy Councilor.*

Linn County. The Linn County Medical Society held 9 meetings during 1953, with outside speakers and an average attendance of 100. We are in the process of setting up an emergency-call system for patients who desire a physician and cannot locate one. And we are going on record as approving the Black Hawk County plan regarding Blue Cross and Blue Shield. We favor the plan for the billing of patients which has been outlined by the State Society, and we deeply regret

attempts to crucify Iowa physicians for it by means of articles in the *READER'S DIGEST* and *SATURDAY EVENING POST*.

All eligible doctors in Linn County are members of our Society, and we have two 50-year men this year, Dr. C. T. Houser and myself.

H. J. JONES, M.D., *Deputy Councilor.*

EIGHTH DISTRICT

I respectfully submit the following Deputy Councilor reports, which cover the activities of the various county medical societies in my district.

C. A. BOICE, M.D., *Councilor.*

Henry County. The Henry County Medical Society held monthly meetings, except in July. Guest speakers included Dr. Huffman, State University of Iowa; Dr. Taylor, Ottumwa; and Dr. Phelps, Ottumwa. Medical films of the general practitioners, malignancy films and general society business, plus reports on the State Society Meeting constituted the programs for the remainder of the meetings. Attendance at meetings averaged approximately 90 per cent.

JOHN R. BEEBE, M.D., *Deputy Councilor.*

Jefferson County. The Jefferson County Medical Society had only one or two regular meetings in 1953. However regular staff meetings, each containing a scientific session, were held each third Monday at the Jefferson County Hospital.

Three of our new members are at the Fairfield Clinic: Dr. James Dunlevy, Dr. Jack Morgan, and Dr. Chris Palcheff. We also have Dr. C. F. Watson, who came here in August.

The County Medical Society has sent \$150.00 to the American Medical Association Education Fund.

R. A. MCGUIRE, M.D., *Deputy Councilor.*

Lee County. In the year 1953, the Lee County Medical Society held four regular meetings, two in Fort Madison and two in Keokuk.

At these meetings a program of guest speakers presented scientific papers, except at the June meeting, when each of six local doctors gave a 20 minute paper on a subject of his own choosing.

All of the doctors in Lee County are in good standing, and our meetings are well attended.

R. E. COOPER, M.D., *Deputy Councilor.*

Louisa County. Since the membership of the Louisa County Medical Society has been reduced to four, and one of those is a life member, meetings have been rather irregular. Other activities have been much restricted too. Several luncheon meetings have been held, mostly social in character. The local Board of Supervisors has requested that the Medical Society audit the county medical bills, which service requires about fifteen minutes once a month.

J. H. CHITTUM, M.D., *Deputy Councilor.*

Muscatine County. The Muscatine County Medical Society has had numerous meetings the past year, none of which were scientific. The chief problem confronting the Society has been that of establishing the new Muscatine County Hospital, which is about ready to open, in such a way that it can be approved by the joint committee on accreditation.

Routine pre-school examinations were carried out in the city schools as usual.

C. P. PHILLIPS, M.D., *Deputy Councilor.*

Scott County. The Scott County Society held monthly meetings on the first Tuesday of each month, with the exceptions of June, July and August. At each meeting the program followed a dinner, and in each instance a speaker presented a scientific paper. The June meeting was the annual picnic, as has been the custom. There was no meeting in July or August, but the Executive Committee met at noon on the first Tuesday of each month throughout the twelve months. Attendance for the Society meetings averaged about 75 to 80.

The Society ventured into new fields this past year. 1) The Society elected a member of its group to act as a part-time paid public relations representative. He was the spokesman for the Society to the press and radio, and his activities were of such great help and value that he was re-elected for 1954. The Scott County Medical Society in cooperation with the Chamber of Commerce co-sponsored a "Health Fair," in which 17 health agencies participated. This was held for two days at the American Legion Hall in Davenport, and contained exhibits and demonstrations involving health and health facilities.

The Scott County Medical Society, in cooperation with Davenport Newspapers Inc., conducted four free public Physicians' Forums. They were given October 29, November 3, November 17 and December 3, on the topics of blood pressure, the weight problem, the cancer problem and the rheumatic fever problem. These were exceedingly well attended and very well received by the lay public. There has been quite a demand for continuation of these forums.

The Scott County Medical Society invited the drug store owners and the pharmacists of the county to be its guests at the annual picnic in June, 1953.

The incorporate Society and the Scott County Medical Society lent a sizable sum to the Iowa State Medical Society's Educational Fund for the State University of Iowa College of Medicine.

There were three deaths among the older members of the Society. Two new members, Dr. Lesasso and Dr. Kaplan, were voted into membership by transfer, and three new members, Dr. Motto, Dr. Flynn and Dr. Malench, were voted into the Society.

PAUL A. WHITE, M.D., *Deputy Councilor.*

Washington County. The Washington County Medical Society has conducted its usual activity during the past year. Two meetings were held—afternoon and evening—with four speakers and the dinner. These were well attended and have been quite satisfactory in that they have brought to our members various problems from the State University.

The Society has conducted an active and thorough immunization program through the schools of the county.

M. L. MCCREEDY, M.D., *Deputy Councilor.*

NINTH DISTRICT

I respectfully submit the following Deputy Councilor reports which cover the activities of the various county medical societies in my district.

E. B. HOWELL, M.D., *Councilor.*

Appanoose County. The Appanoose County Medical Society decided at the beginning of the year to combine Hospital Staff and County Medical Society Meetings in so far as business is concerned. The idea was that the combination would expedite business and cut the number of meetings, leaving more time

for a good yearly program. We were supporting a building program to enlarge the St. Joseph's Hospital, and our county officers spent considerable time on it.

As it worked out, it was hard to distinguish Staff from Medical Society business, and every thing was crowded into noon-hour meetings, including dinner and program, leaving little time for any of the three. As a result, perhaps the business of the County Medical Society has suffered.

We have continued our support of the microfilm chest screening program for T. B.

At our meeting which preceded our Crippled Childrens Clinic, the visiting doctors were guest speakers. We had no other scientific meetings.

E. A. LARSEN, M.D., *Deputy Councilor.*

Davis County. On March 18, Dr. Gordon McNeer, cancer specialist from New York City was sponsored in a talk here on the treatment of gastric malignancy. The American Cancer Society and the Cancer Division of the State Board of Health were co-sponsors.

Individuals in the society have been active in the educational program of the American Cancer Society. A lay educational director was selected and has started a forthright educational program in every corner of the county. The doctors have been cooperating by making personal appearances.

Our physicians, in large numbers, have attended the State Medical Society's spring meeting. Also the interim meetings called in Des Moines have been well attended, and members have attended the various specialty meetings at Des Moines and at Iowa City. A number of physicians attended postgraduate studies and meetings including the E. E. N. T. meeting in Florida, in March, the A.M.A. meeting in New York City, in June, the E. E. N. T. meeting in Chicago, in October, the Radiological Society meeting in Chicago, in December, the College of Physicians meeting in Chicago, in October, as well as others not as far distant.

Our Society doctors have been speakers at the vocational guidance courses for seniors in the high school. The society has conducted the pre-school round-up examinations as well as the examination of the athletes at the high school.

The society has been instrumental in improving the physical equipment at the Davis County Hospital. Particular reference is made to a new automatic respirator for premature infants.

The members of the Davis County Medical Society this year for the first time, presented a program entitled "Modern Medicine" at which various medical topics were discussed as a part of the Adult Education Program held annually in this city. The course involved some 10-12 lectures by various members of the County Society and covered several topics such as infectious disease, heart trouble, obesity, sterility, etc. which the lay audience had indicated would be of interest to them.

P. T. MEYERS, M.D., *Deputy Councilor.*

Keokuk County. The Keokuk County Medical Society had two meetings in 1953. The meetings were of a get-together sort, rather than scientific.

All members cooperated with all health activities in the county, and also aided the Hospital Trustees when asked to do so.

We have one new member in person of Dr. R. Giles Gellet. He is located in Sigourney.

DELL L. GROTHAUS, M.D., *Deputy Councilor.*

Lucas County. The Lucas County Medical Society has had monthly medical meetings throughout the year 1953. Our membership remains the same, and hospital and nursing home facilities remain as last year.

The society has taken part in the crippled children's program, and the entire county has been covered in tuberculosis testing and X-ray surveys. Our members have attended many scientific meetings and programs throughout the State.

R. E. ANDERSON, M.D., *Deputy Councilor.*

Mahaska County. The Mahaska County Medical Society has 16 active members and one "life" member, Dr. Walter Wright of Rose Hill. Every doctor in the county is a member. During the year we had meetings in January, April, May, June, Oct., Nov., and December. The meetings were well attended, and harmony prevailed. Some of the meetings were for business, and some were for scientific purposes.

We formed a medical staff to work with and cooperate with the Board of Trustees of the Mahaska Hospital. A delegate was sent to the Iowa State Medical Society meeting in April, and most all our members attended the scientific sessions of that meeting. Our President, Dr. Wilcox, was in attendance at the October meeting of Presidents and Secretaries in Des Moines.

E. B. WILCOX, M.D., *Deputy Councilor.*

Marion County. The Marion County Medical Society held four joint meetings during 1953 with the staff of the U. S. Veterans Hospital in Knoxville. Each of the meetings was preceded by a dinner in the nurses' dining room of the hospital, and was highlighted by an address by a guest speaker.

During the year, one member of the Society died, and no additional physicians located in the county.

H. L. BRIDGEMAN, M.D., *Deputy Councilor.*

Monroe County. Because of its small membership, the activities of the Monroe County Medical Society for the year 1953 were somewhat limited. Many of the members attended staff meetings with members of Wapello and Marion County groups.

Several meetings were held, and on two occasions members of the Society met with the Board of Supervisors in an effort to arrange a satisfactory fee schedule for care of indigent and relief patients. It was finally decided to submit our regular charges and then deduct 25 per cent.

We hope that for 1954 our Society will be more active.

H. J. RICHTER, M.D., *Deputy Councilor.*

Wapello County. The Wapello County Medical Society has a membership of 54, all but 3 of whom reside in Ottumwa. Here it was on Jan. 7, 1873, that the Des Moines Valley Medical Association was formed, with a membership that soon covered a territory extending from the city of Des Moines to Keokuk, with many towns and villages beyond the Valley. The activities of the Wapello County Medical Society spread over the same territory today.

There were eight regular meetings during 1953, six guest speakers, a monthly staff meeting at each hospital, a monthly meeting at Sunnyslope Sanitarium, under the direction of Dr. C. W. Gray, and a tumor clinic each Saturday morning at the Ottumwa Hospital. There was one death among members of the society during the year and three removals. Five new members were admitted.

There was a 15 per cent increase in all fields of activity. Nearly 14,000 patients required hospital care in Ottumwa in 1953. This was 15 per cent more than the previous year. There were 9,652 patients admitted to the two general hospitals, and 4,269 treated as "out-patients," that is, treated in the hospital but not kept over night. Each day in the year found an average of 187 patients in beds in the two hospitals. Capacity of the St. Joseph and Ottumwa hospitals is adequate to care for this demand, plus an increase which is to be expected as the community grows in population. There were 4,016 operations performed in Ottumwa, which includes in its medical profession many specialists in the various fields of surgery. There were 1,307 babies born in hospitals in 1953. This compares with 1,212 the previous year.

The Woman's Auxiliary meets at some member's home the same night the County Society meets. A formal program opening at 7:30 p. m. is carried out. Then games and luncheon follows, with the members' husbands as guests.

Able speakers from both groups addressed various social and business organizations with telling success.

The Wapello County Auxiliary met seven times during 1953, and the average attendance was 19 members. The group had a paid-up membership of 46. Annual dues of the local auxiliary are \$4, of which \$1 stays in the local chapter. During the year, the women's organization made contributions to the Community Chest and the State Student Nurses' Loan Fund. It continued its sponsorship of its student nurse during her second year of training, and in April it gave \$100 to the American Medical Education Fund.

C. A. HENRY, M.D., *Deputy Councilor.*

Wayne County. The Wayne County Medical Society has held eight meetings and one picnic during 1953. Meetings were addressed by out-of-the-county speakers or by members. At some meetings motion pictures were shown.

Vaccinations were given in each district at the time pre-school children were examined. One doctor has retired. The new county hospital is expected to be opened in July or August.

J. H. McCALL, M.D., *Deputy Councilor.*

TENTH DISTRICT

After looking over the reports of the deputy Councilors, of the Tenth Councilor District, I feel the district has done very well the past year.

We have in this district the Southwestern Iowa Medical Society which meets the second Wednesday every other month and each meeting is sponsored by a different county, which obtains a speaker and makes arrangements for the evening meal.

Warren county members have not been attending this meeting very often, for it is a long drive for them and they depend on meetings and scientific programs, largely from Polk County.

Most all of us have meetings once each month at our county hospitals, and these are well attended.

I. K. SAYRE, M.D., *Councilor.*

Adair County. The Adair County Medical Society has maintained its usual activities regarding immunization programs, but has had no scientific programs of its own. The society sponsored a scientific program of the Southwestern Iowa Medical Society in the early part of the year, but otherwise has carried on its

activities during staff meetings at the Adair County Memorial Hospital. Membership in the Society has remained the same as a year ago.

A. S. BOWERS, M.D., *Deputy Councilor*.

Madison County. The Madison County Medical Society has had no special programs the past year, but has had a few meetings to discuss local problems. We usually meet following regular staff meetings at the Madison County Memorial Hospital. The hospital continues to give excellent service.

Our society maintains a 100 per cent membership—a total of eight.

Each of the members has attended one or more scientific courses and scientific programs at various places during the year.

C. B. HICKENLOOPER, M.D., *Deputy Councilor*.

Ringgold County. The troubles of the Ringgold County Society over the past year involve principally the new hospital. Very foolishly we started out with a combined Board, about equally made up of M. D.'s and osteopaths. By reason of one young practitioner's leaving the county because of the osteopath situation, the county society was left with three members, only one of whom was in Mt. Ayr.

After the resignation of the M. D.'s on the staff, two members of the Hospital Board resigned and were replaced by appointment, and two new ones were elected, since which time we have not had very much trouble. Two osteopaths were placed on the courtesy staff, but only one of them ever shows up at the hospital, and none at the staff meetings. The hospital suffered quite a shock in the death of the Administrator in midsummer, but she had established the hospital on a good working basis, and at present it is doing very well.

August 1, two new practitioners located in Mt. Ayr, and are of great advantage to the hospital.

The Society has not held many meetings, but many of the members have attended meetings elsewhere, besides the Academy of General Practice.

With more members and harmonious relations at the hospital, we hope the coming year may be much better.

E. J. WATSON, M.D., *Deputy Councilor*.

Taylor County. The Taylor County Medical Society meets regularly on the Second Monday of each month. The active members have aided the Red Cross Bloodmobile when it has visited the county.

While our membership is small, we feel that our regular meetings are very much worth while.

G. W. RIMEL, M.D., *Deputy Councilor*.

Warren County. The Warren County Medical Society has had practically no activities.

We hold one annual meeting in December, to elect officers and discuss such things as standard fees. We depend on Polk County and other large cities for scientific meetings.

As you know, Dr. Hickman is in the Armed Services, leaving us with 6 active M.D.'s in the county. There has been talk of getting a county hospital here, but at the present time interest isn't sufficient to get any building project started.

C. A. TRUEBLOOD, M.D., *Deputy Councilor*.

ELEVENTH DISTRICT

The Eleventh District has had a somewhat mixed year as far as activities are concerned. Besides regular

county meetings, Pottawattamie County put on two very excellent clinical conferences. Cass, Montgomery and Page counties put on one day. All were attended by a good percentage of the district.

Several of the counties have had trying conditions arise within their membership during the past year, but they all came through with very good results, with the exception of Fremont County, which we are attempting to organize or re-organize.

I wish to thank the following Deputy Councilors for their cooperation in the past year: Charles H. Flynn, M.D., Clarinda; Ralph H. Moe, M.D., Griswold; C. V. Edwards, M.D., Council Bluffs; Tom Shonka, M.D., Malvern; Jos. H. Spearing, M.D., Harlan; W. F. Geigerich, M.D., Atlantic; L. E. Jensen, M.D., Audubon; Ed. Croxdale, M.D., Villisca; and A. C. Bergstrom, M.D., Mo. Valley.

The Eleventh District feels very honored and fortunate in having President Elect, G. V. Caughlan, from our District.

OSCAR ALDEN, M.D., *Councilor*.

Reports of Standing Committees

LEGISLATIVE COMMITTEE

The By-Laws of the Iowa State Medical Society state that the Legislative Committee is responsible "Under the direction of the House of Delegates, for representing the Society in securing and enforcing legislation in the interests of public health and in scientific medicine and shall keep in touch with professional and public opinion." The Committee, during the past year, has attempted to live up to this responsibility.

The legislative session of the 55th General Assembly was in its closing week during the 1953 annual meeting of the Iowa State Medical Society. The supplementary report of the Legislative Committee presented to the House of Delegates at that time, covered most of the legislation considered by the 55th General Assembly. Not covered in that report, however, was Senate File 235 which made some radical changes in the Consent for Autopsy Law. This law was passed on the last day of the session and defines the individuals who have the legal right to give consent for autopsy and the manner in which the consent may be given.

The Board of Medical Examiners Law, passed by the 55th General Assembly, has been operative since July 4, 1953. It seems to be working satisfactorily, and no major problems have been encountered under it.

So as to determine the position of the members of the Iowa State Medical Society on current issues, on August 26, 1953, a questionnaire was sent to each member of the Iowa State Medical Society which dealt with legislative problems at the national and the state level. Of approximately 2500 questionnaires sent out, 814 were returned. This represented a return of 32.6 per cent. Questionnaires were returned from every county in the state. There were ten questions in this questionnaire. Question No. 1 dealt with non-service connected disability medical care in Veterans Administration hospitals. Seven hundred and sixteen, or 88 per cent of the replies were in favor of the American Medical Association's position of limiting non-service connected disabilities in Veterans Administration hospitals to those patients with tuberculosis and neu-

ropsychiatric disorders. Eighty-nine physicians, or 12 per cent, were opposed to the AMA position. Some of those who opposed the AMA position, however, were opposed to the treatment of any non-service connected disability. A number of physicians, however, felt that the indigent veteran should be treated for non-service connected disabilities.

The first portion of the second question dealt with tax deferment on premiums to purchase retirement annuities. The Jenkins-Keogh Bills currently before Congress would provide for the establishment of such programs. Seven hundred fifty-four physicians, or 93 per cent, were in favor of such a plan and forty-one, or 7 per cent, were against it. The second portion of question No. 2 dealt with the extension of social security coverage to physicians. Five hundred and eighty-four physicians, or 72 per cent were opposed to this extension of social security, and 103, or 28 per cent were in favor of it. Question No. 3 dealt with the Bricker Resolution. Seven hundred one physicians, or 86 per cent, were in favor of this resolution, and 34, or 14 per cent were against it. Question No. 4 dealt with the deduction of medical expenses under federal income tax laws. Six hundred forty-four physicians, or 79 per cent, were in favor of more liberal deductions for medical expenses. One hundred twenty-eight physicians or 21 per cent were opposed to any change in the current law. Question No. 5 dealt with Public Health Departments and Public Health Units. Seven hundred seventy-three physicians, or 95 per cent, approved of the policy of the Legislative Committee in stating that there must be a clear-cut definition of what constitute Public Health Services before the Legislative Committee would support legislation expanding activities of Public Health Departments. Only 10 physicians, or 5 per cent, disapproved of this position of the Legislative Committee. Question No. 6 dealt with federal aid to medical education. Six hundred ninety-seven physicians, or 86 per cent, were opposed to such federal aid, and 84, or 14 per cent were in favor of it. Numerous comments indicated, however, that there should be adequate support of the State University of Iowa, including the Medical School. Question No. 7 dealt with federal aid to prepaid health plans. Seven hundred sixty-four physicians, or 94 per cent, were opposed to federal aid to prepaid health plans. Question No. 8 dealt with income tax deductions for educational expenses. Seven hundred fifty-nine physicians, or 93 per cent, believed that physicians should have the opportunity of deducting their postgraduate educational expenses just as they now deduct their expenses for attending medical meetings. Question No. 9 consisted of twelve sections dealing with a variety of subjects such as the Hill-Burton Hospital Construction Program and the osteopathic problem. These questions were general in nature. The comments indicated, however, that the osteopathic situation is regarded as a problem by the physicians throughout the entire state. Many of the comments also indicated that a single licensing board for practitioners of the healing arts might be desirable. Question No. 10 dealt with state legislation. On this question, also, comments indicated a desire for a single medical licensing board. A number of comments were also in favor of another revision of the Coroner Law.

The answers to this questionnaire will serve as a guide to the Legislative Committee as it carries out the legislative program of the Iowa State Medical Society.

During the past year, every effort has been made to develop a close relationship between the physicians and the state senators and representatives at the local level. All physicians, as well as the Legislative Contact Men in each county, have been requested to visit with their Senators and Congressmen, even though no legislative problem now confronts us. The same effort has been made to keep in touch with the Senators and Congressmen, at the national level. The Legislative Committee realizes that the success of our legislative program depends on how well the physicians work at the local level.

Following the recess of Congress last fall, the Legislative Committee held meetings with as many of the Congressmen as possible while they were home in Iowa. Close contact is being maintained with the Congressmen and Senators now that they have returned to Washington. This is a very necessary procedure because of the legislation currently before Congress. Legislative bulletins will be sent to members of the Iowa State Medical Society to keep them informed of the latest developments on this legislation.

The Legislative Committee wishes to express its sincere appreciation to the members of the Iowa State Medical Society for their cooperation during the past year. It is especially appreciative of the efforts of the Legislative Contact Men. Appreciation is also expressed to Doctor Bernard, Miss McCord, Mr. Don Taylor and the other members of the Executive Staff for the very excellent cooperation and support which they have given us. The Legislative Committee wishes especially to commend Mr. I. W. Myers for his untiring efforts in behalf of the legislative program of the Society.

F. C. COLEMAN, M.D., *Chairman.*

J. W. BILLINGSLEY, M.D.

JOHN D. CONNER, M.D.

ROBERT N. LARIMER, M.D.

A. B. PHILLIPS, M.D.

NECROLOGY COMMITTEE

The following members of the Iowa State Medical Society died during 1953:

<i>Name</i>	<i>Town</i>	<i>Age</i>
Nathaniel G. Alcock, Iowa City		72
Walter E. Baker, Des Moines		77
Oliver S. Barber, West Chicago, Illinois		78
Andrew W. Bennett, Iowa City		62
George A. Biebesheimer, Reinbeck		71
Frederick S. Bowen, Woodburn		78
Marion H. Brinker, Jefferson		60
Earl B. Bush, Ames		69
Edwin J. Butterfield, Tucson, Arizona		73
William F. Carver, Fort Dodge		84
Don S. Challed, Cedar Rapids		48
George M. Crabb, Mason City		74
Robert M. Cullison, Winston Salem, N. C.		61
Charles H. DeWitt, Macedonia		66
James W. Doles, Knoxville		44
William H. Donovan, Iowa City		69
Earl P. Farnum, Sibley		75
Fred C. Foley, Newell		85
Frederick Fuerste, Dubuque		59
Paul Gardner, New Hampton		79

George C. Giles, Oakland	83
Edgar O. Hicks, Clinton	33
William B. Hight, Des Moines	78
Henry M. Hills, Lamoni	81
Alfred A. Hoffman, Waterloo	62
J. A. William Johnson, Marshalltown	68
Henry D. Jones, Schleswig	73
Joseph I. Kelly, Burlington	81
Leo C. Kuhn, Decorah	64
Nimrod J. Lease, Crawfordsville	83
Harry M. Levin, Waterloo	57
Christian B. Luginbuhl, Des Moines	70
William H. McCartney, Des Moines	77
James E. McDonald, Mason City	85
Harold H. Moore, Ottumwa	63
Zenella E. N. Morris, Stockport	89
Judson W. Myers, Postville	64
Harry E. Nelson, Dayton	84
Alva C. Norton, Rockwell City	81
Frank A. Priessman, Keokuk	68
Edward L. Reincke, Dubuque	73
Lewis A. Rodgers, Oskaloosa	89
Cullen B. Roe, Afton	65
Henry C. Schmitz, Des Moines	70
Albert A. Schultz, Fort Dodge	65
Franklin C. Smith, Mt. Ayr	85
Leo O. Snook, Jr., Wesley	42
Edward D. Taylor, Bettendorf	76
Mary L. Tinley, Council Bluffs	84
Joseph O. Trimbo, Chelsea	80
Ambrose E. Wanamaker, Hamburg	86
Edward J. Wehman, Burlington	73
Fred L. Wells, Des Moines	85
Nelson M. Whitehill, Boone	83
Benjamin G. Williams, Oskaloosa	78
Louis C. Winter, Wilton Junction	80
Arnold O. Wirsig, Shenandoah	69
Max E. Witte, Independence	58
Arthur D. Woods, State Center	72

(The Necrology Committee consists of the Councilors.)

MEDICO-LEGAL COMMITTEE

This committee has not had occasion to meet officially this past year. We have been called upon for advice and in each case we have satisfied the request by means of a telephone conference of the committee members.

We have been prepared to serve any physician whose problem came within the province of this committee.

Respectfully submitted,
L. K. MEREDITH, M.D., *Chairman.*
E. F. VAN EPPS, M.D.
V. C. ROBINSON, M.D.

COMMITTEE ON ARTICLES OF INCORPORATION AND BY-LAWS

Prior to the annual meeting last year, the Committee worked day and night revising the Articles of Incorporation and the Constitution and By-Laws. A copy was sent to each physician for perusal and comment. The Committee will welcome comments and

suggestions from any member of the society. Undoubtedly we will have to devote additional time to review and study of the Articles of Incorporation and By-Laws, because in the development of such a document there are always changes and improvements to be expected.

RUBIN H. FLOCKS, M.D., *Chairman.*
A. B. PHILLIPS, M.D.
E. H. SIBLEY, M.D.

COMMITTEE ON MEDICAL EDUCATION AND HOSPITALS

The report of your Committee on Medical Education and Hospitals is entirely different from the ones of previous years, and the reason for this, is very simply stated. The State Society has realized the object we have been striving for, viz the appointment of a Dean of the Medical School.

Because your Committee of the past three years, as well as the Special Committee appointed at the Burlington meeting, have felt that the solution of most of the problems at the Medical School could be accomplished by such an action, we were very happy, as you all were, when the announcement was made early last year that Dr. Norman B. Nelson had accepted the position as Dean.

The vindication of this thinking has been shown in the way Dr. Nelson has taken over the difficult job and the fact that no special problem has presented itself to your Committee. He is gradually taking over the administration in a manner most pleasing to all. We have felt we should not bother him unnecessarily, until he has had a chance to get his feet on the ground. He has consulted unofficially with various members of the committee and with officers of the Society. In the coming year, undoubtedly there will be the need of meetings with him in order that we may be of assistance in the solution of mutual problems.

Your committee and the officers of the Society have held two meetings, one with officers and directors of the Farm Bureau and the other with the State Board of Education. The very fact of these meetings is significant and shows the spirit of cooperation now existing.

We welcome Dr. Nelson to our ranks and pledge any assistance we can give in order to build an even stronger medical school at Iowa City.

B. T. WHITAKER, M.D., *Chairman.*

GRIEVANCE COMMITTEE

To date, the Grievance Committee has received 91 complaints. Three of these are in the process of preliminary correspondence, the obtaining of signed authorizations, etc., and have not yet been considered by the Committee. In the past year, the Committee has acted on 16 cases, as compared to 21 cases during the preceding year. These are the new cases, and, of course, action was taken on some held over from the year before. Except for the three newest complaints, there are only two that pose problems, and these two may go through legal channels.

The Committee met eight times in 1953, with an average attendance of three-fourths of its members. We were saddened in June by the death of Doctor Kuhn, who had been very active in the Committee.

Most of the grievances received are fanned to flame by the doctor in an attempt to collect an overdue account. The Committee knows that it is perfectly proper

for a doctor to do this, but it is in a position to see that the doctor could prevent many misunderstandings by taking more care in explaining and discussing fees and by warning the patient and his relatives of the possibility of disappointing results before he enters into a procedure which will entail considerable expense for the patient. In the past year, where there was clear misunderstanding, the Grievance Committee twice recommended that the doctor reduce his fee in the interests of better public relations.

Several grievances resulted from what the complainant considered unprofessional conduct in the doctor's handling of his case.

The Committee has been grateful for the cooperation of doctors whom it has been necessary for them to contact, and especially to those whom it has been necessary to have attend its meetings.

The Grievance Committee has endeavored to erase misconceptions harbored by some of the laity in their relations with the medical profession. We have received several letters thanking the Committee for its help. Often the grievance is such that it is hard to change the complainant's attitude. Where possible, the Committee has interviewed the individual. It has been necessary on several occasions to remind a physician of his obligations to the public. We hope we have been an aid in the fostering of better public relations at a time when the physician is the object of so much censure in current magazines.

CHARLES H. FLYNN, M.D., *Secretary.*

PUBLIC HEALTH COMMITTEE

The Committee on Public Health is an outgrowth of the reorganization of various committees of the Medical Society. It is a ten man committee, consisting of a general chairman, and the chairmen of the following subcommittees: Cancer, Geriatrics, Rehabilitation, Maternal and Child Health, Industrial Health, National Health Associations, Gamma Globulin, and Rural Health.

This committee meets approximately every three months to formulate an over all policy which is positive in its approach and helps avoid duplication of effort.

The outstanding impression I have received from the work of these committeemen is the fact that, although each of the members is in a position of responsibility, busy and already overtaxed, each one is willing to devote his time and energy to secure better medical services in the state of Iowa. Their performance demonstrates that the common excuse "too busy to attend" is far outdated. The main problem is to find an effective way of reporting the excellent work these committeemen have done. County societies must be aware of the work while it is in progress if they are to give the committee their constructive as well as critical help. It is my hope that the reports of these subcommittees will serve to stimulate all members to express their desires. I will appreciate receiving written comments or discussion about the work of any of these committees. For example, What do the members WANT the Mental Health Committee or the Rural Health Committee to do? What will YOU do to help these committees?

The committees were grouped because there is an inter-relationship of purpose in their work. Although they are not public relations committees, they must formulate policies that will improve our relationship

with the public. Recent issues of current magazines have sent up their own standards for judging hospitals. How does it sound to the people of Iowa, who have contributed heavily to these national health organizations, that according to those standards we have no place in Iowa where adequate diagnosis and treatment of cancer can be found?

A good suggestion reported in the minutes of Dr. Heeren's committee, was a plan for coordinating post-graduate medical education in the state, to improve its quality and availability. Recognition by the local press and the public of doctors who have been willing to devote time and effort in this manner would help counteract the unfavorable comments of the popular magazine articles creating so much sensationalism today.

Our aim should be to have the organization which represents the doctors of Iowa pick the best from the world's experience in public health work and formulate it so it can be disseminated to the people of Iowa.

E. A. LARSEN, M.D., *Chairman.*

SUBCOMMITTEE ON CANCER

A meeting of the Subcommittee on Cancer was held in the State Medical Society Building August 19, 1953, with five members in attendance.

The matter of cancer seminars or institutes was discussed, and it was voted that six should be held during the coming year. These programs are carried out in cooperation with the Speakers' Bureau of the Society, funds being made available from federal grants by the State Department of Health.

In a discussion of the tumor clinics, of which there are now nine, it was revealed that these have been making excellent progress in some areas, but that in others, there has been a lack of cooperation on the part of practitioners so that few cases are referred to the clinic. Ways and means for acquainting physicians in general with the purpose of the tumor clinics were discussed, and it was suggested that the Academy of General Practice would serve as a good medium for disseminating such information.

It was unanimously agreed that a regulation to make the reporting of malignancies compulsory would serve no practical purpose.

The Committee gave its approval to the free distribution of the CANCER BULLETIN by the State Department of Health to physicians of the State.

The Committee agreed to assume responsibility for a TV program on cancer, details to be worked out by the television staff of the State Medical Society.

Since the meeting of the Committee, cancer institutes have been held as follows:

October 21—New Hampton, Iowa
November 10—Grinnell, Iowa
November 12—Storm Lake, Iowa
November 19—Ottumwa, Iowa

Another institute is planned for Cedar Falls sometime early this year.

The Chairman, at the request of the Society, wrote a letter addressed to hospital administrators and chiefs of staff explaining that omission of Iowa Hospitals from the so called "Four Star List" of institutions for the treatment of cancer appearing in a recent article in the WOMAN'S HOME COMPANION.

EDMUND G. ZIMMERER, M.D., *Chairman.*

SUBCOMMITTEE ON GERIATRICS

With the reduction in morbidity and mortality rates of infectious diseases, the life span of the American people has increased markedly. This has caused the proportion of the aged in the general population steadily to rise, and has brought about an inevitable increase in the number of persons with chronic disease. During the years 1940 to 1950, there was a 20 per cent increase in the number of people of age 65 or over in Iowa. Medical scientists, recognizing the trends in the changing population, have become interested in the basic concepts of aging. This new field in medicine, called gerontology, includes the basis physiologic and biochemical changes that occur in man as he grows old. Although the gerontologists are interested in the type of illness seen in older people and in methods of treatment, there are more immediate problems of aging which must be cared for. Some of these problems are sociologic, economic, political, or recreational, and are outside the realm of the basic medical sciences. In order to cover all the facets of this problem, the word *geriatrics* has been coined, and by common usage has come to include medical needs. The Iowa State Medical Society, recognizing the fact that there is a need for caring for old people, appointed a committee to investigate the role the physician must take in the problem of geriatrics. The Committee decided to determine, first, whether the problem is the responsibility solely of the physicians, and secondly, in case it is not their total responsibility, what part the medical groups should take in dealing with it.

The type of cases giving local departments of public welfare the most difficulty are: (1) mental cases which are too disturbed to be properly cared for in nursing homes and in the average public infirmary, yet are not committable to state mental hospitals under current admission requirements; (2) deteriorating seniles; and (3) cases requiring long-term nursing care, but not hospitalization. Other ailments commonly seen in elderly individuals are cancer, cardiovascular diseases (including strokes and peripheral vascular disease), physical handicaps, arthritis, diabetes and neurological disorders. It can readily be seen that the ailments listed above are not peculiar to aged people, but can occur in any age group. It will also be noted that the diseases outlined fall into the group usually classified as long-term or chronic illness.

Only a few individuals in the older age group have medical complaints. Most of the older people have problems that are peculiar to the elderly, and perhaps the greatest problem is that of employment. From this, stems the economic and housing problem. Then there are the problems of mental hygiene, planned recreation, the teaching of daily living both with themselves and others, cultural aspects of aging, old age security, and vocational guidance. Most of these aspects of so-called geriatrics are not in the province of the medical profession, but in the provinces of other agencies under control of local, state or federal governments.

Thus, the Committee on Geriatrics feels that the major problems of old age are not medical, and therefore not solely the responsibility of the Iowa State Medical Society or the physicians of Iowa. The committee suggests that the Iowa State Medical Society cooperate with other agencies in the state either through this Committee or through a special group appointed by the president.

The care of the sick still is the major goal of the physicians comprising the State Society. The diseases outlined above are not peculiar to the older person, but can be seen in all age groups. Most of the diseases are chronic and require a long-term care or convalescence either in a hospital or at home.

Since the chronically ill, rather than the aged, constitute a well-defined medical problem in this state, the Geriatrics Committee suggests to the State Society, either that the Committee's name should be changed and its scope and functions should be redefined, or that the original Committee should be disbanded and a committee on chronic illness appointed. Either group could work with other agencies in the state who are interested in the chronically ill as well as the aged and thereby keep the State Medical Society in close touch with all phases of geriatrics.

W. D. PAUL, M.D., *Chairman*,
ABRAHAM GELPERIN, M.D.,
C. V. EDWARDS, M.D.

SUBCOMMITTEE ON ARTHRITIS AND RHEUMATISM

Dr. R. N. Larimer, president of the Iowa State Medical Society, appointed a committee to cooperate with the Arthritis and Rheumatism Foundation. This committee consists of Dr. W. D. Paul (associate professor of medicine, chairman of the division of physical medicine and director of the rehabilitation unit of the University hospital) as chairman, Dr. A. B. Hendricks, of Davenport, Dr. K. R. Kingsbury, of Ottumwa, and Dr. H. G. Marinos, of Mason City. This Committee has had many discussions and much correspondence on the problem of arthritis and rheumatism in the state of Iowa. Because of his wide experience, Dr. C. B. Larson, professor and head of Department of Orthopedics at the State University of Iowa met with the Committee in the capacity of consultant.

The Committee was in agreement that there were many people in the state of Iowa who were suffering from rheumatism and/or arthritis and that aside from the medical school at Iowa City, there were no clinics or agencies that the arthritics could visit for definitive treatment or other help. For this reason it would be advisable to ask the Arthritis and Rheumatism Foundation of New York to establish a chapter in the state of Iowa.

After a chapter of the Foundation is started in Iowa, money would be available for patient care, for education, both lay and medical, and for research. The committee felt that a program to improve the arthritis problem in Iowa should consist of two phases. The first phase would be to foster research, to emphasize to both the public and the medical profession the scope of the arthritis problem and probably to start a mobile clinic. When this part of the program was functioning satisfactorily, then the second phase could be started. This second phase would be to provide free beds for arthritic patients and to expand the service by opening clinics in various areas throughout the state.

The Committee agreed that because most of the research on arthritis is being done at the University of Iowa at present, that the Foundation should be asked to help support part of the present research and make funds available for expansion of the research program.

The Committee suggested the following as the goal for the Iowa Chapter.

I. Research Program

- A. Study of metabolism of arthritis
 - 1. Support of metabolic ward.
 - 2. Part-time help of physician.
- B. Study of base-line characteristics of rheumatoid arthritis to evaluate effectiveness of antirheumatic drugs or other treatments.
 - 1. Assistance of graduate student in biochemistry or nutrition.
 - 2. Part-time assistant in nutrition.

Cost: \$18,000.

II. Mobile Clinic

- A. Station wagon
- B. Physiotherapist
- C. Occupational therapist
- D. Social worker in arthritis
- E. Supplies

Cost: \$10,000

III. Education

- A. Lectures to medical students.
- B. Lectures or forums on arthritis to physicians in county medical societies.
 - 1. Cost of organizing forums or county clinics.
 - 2. Cost of transportation of specialists from outside the state.
- C. Lay education
 - 1. Organizing meetings for Farm Bureaus, P.T.A.'s, etc.
 - 2. Audiovisual aids
 - 3. Printed literature, cards, etc.

Cost: \$10,000.

IV. Campaign expenses for Iowa Chapter

Cost: \$10,000.

Total: \$48,000.

The Committee also recommended that as soon as the Iowa Chapter is organized and funds solicited, either this Committee should be expanded or that subcommittees representing the different geographic areas should be established to help the lay organization carry on its work.

It was also suggested that Mr. Arant H. Sherman, of Davenport, be asked to serve as state chairman of the Iowa Chapter.

W. D. PAUL, M.D., *Chairman.*

SUBCOMMITTEE ON REHABILITATION

The Subcommittee on Rehabilitation held a meeting on July 23, 1953, and submits the following report:

Committee members Dr. Krigsten, Sioux City, Drs. Wirtz and Samberg, of Des Moines, Dr. Adams, Mason City, and Dr. Larson, Chairman, of Iowa City, were present.

Because no agenda was available for the first meeting, the meeting was begun with an introductory message announcing this subcommittee as a newly established one by the State Society, assigned to explore the subject of rehabilitation as it pertained to the Iowa State Medical Society. The meeting was then declared open.

The ensuing discussion made clear that the Committee could not proceed toward concrete opinions and recommendations until pertinent facts were available. The Committee assigned itself the following tasks for the future: (1) To define physical rehabilitation; (2) to survey the rehabilitation case load in the state of Iowa; (3) to survey the existing facilities for rehabil-

itation therapy in the state of Iowa; (4) as a means of discovering a base line of practical feasibility of such centers, to accumulate evidence as to the means and methods of organization, the types of personnel utilized, the amount of equipment necessary, etc., of rehabilitation centers elsewhere.

The problems were variously assigned to members of the Committee, and no date was set for a subsequent meeting. The chairman has been in contact with various members from time to time, and has learned that pertinent data are being slowly collected.

Because the scope and significance of the problem of rehabilitation and its possible impact on the total picture of medical care of the future, the Committee asks for an extension of assignment.

CARROLL B. LARSON, M.D., *Chairman.*

SUBCOMMITTEE ON MATERNAL AND CHILD HEALTH

The Subcommittee on Maternal and Child Health has had no recent meetings.

Your chairman, along with a representative of the State Department of Health and also a member of this Committee, attended the Fourth National Conference on School Health held at Highland Park, Illinois, the last of September. We have not had an opportunity to confer on our findings at this meeting yet, but hope to be able to do so soon and to present a positive program of school health for the State of Iowa.

The maternal death investigations, which were begun in October, 1952, but covered the year, have been progressing very well. It is believed that very valuable information is being assembled from this study both from the standpoint of statistics and education.

No work has been done, as yet, on a study of infant deaths in the state.

C. P. PHILLIPS, M.D., *Chairman.*

SUBCOMMITTEE ON MENTAL HEALTH

The Subcommittee on Mental Health held four meetings during the year, with the majority of members present at all meetings. Possibly psychiatrists are more in demand as speakers than are practitioners of other specialties because of the increasing public interest in mental health. Members of the committee received many calls to give talks before different organizations during the years 1952 and 1953. The doctors felt that if they drove some 50 to 100 miles to talk to a group, the group should be large enough to warrant that expenditure of time. They also felt that the talks should be scheduled more or less at the convenience of the speaker. The Committee discussed whether or not a fee should be charged these lay organizations, and its final decision was that the doctors should not charge a fee, but since this is an educational activity, the State Society should be asked to consider defraying travel expenses from Speakers' Bureau funds.

The Committee discussed a possible model commitment law at several of its meetings. This is not an easy thing upon which to make a decision because of the many factors involved. The Committee also felt that more attention should be paid to the rules and regulations governing the release of patients from state hospitals. A subcommittee was appointed to study commitment laws and bring back a recommendation.

One of the big jobs which the Committee would like to accomplish is the psychiatric education of the gen-

eral membership of the State Society. The general practitioner who sees the majority of patients first could do a great deal along the lines of diagnosing possible mental illness. He needs to be trained to observe the signs and to take an interest in preventing the aggravation of mental difficulty. Members of the Committee felt that many times an additional five minutes spent with a patient would disclose whether or not mental illness is involved. The sending of small (3x5) cards with educational material on them to each member of the State Society was suggested as one possibility for carrying on an educational campaign. Talks before county medical societies were suggested as a second means. Members of the Committee wished to consider these alternatives and to arrange for trail programs with county medical societies.

Dr. C. C. Graves, who is now a member of the Committee, discussed many of the problems that arise in the mental hospitals. The Committee was most sympathetic toward Dr. Graves' predicament and gave him practically full cooperation in trying to work out some solutions. Meetings with him at the mental hospitals were scheduled. The Committee also offered to meet with the Board of Control to discuss the problems and give its advice when called upon. It volunteered to attempt getting more general practitioners to help the superintendents at the mental hospitals in providing general medical care for the inmates.

The Committee met with the President of the Iowa Society for Mental Hygiene, Rev. Noel Orcutt, and promised full cooperation with his organization's program for better education of the public. The Committee promised to provide an advisory committee, and the individual members pledged their support to the work the group is trying to do. It was felt that it should be for the most part a lay organization, but that it needed the advice and counsel of doctors of medicine.

Members of the Committee were agreed that an aggressive campaign in mental health education should be waged. There is still too great a lack of knowledge of what mental health really is. It should not be a passive science, but rather an active one. To this end, the members of the Committee promised their assistance in the year ahead. Another meeting is scheduled before the annual meeting, and a short report of it will be made orally.

JOHN I. MARKER, M.D., *Chairman*.

M. B. EMMONS, M.D.

C. C. GRAVES, M.D.

J. B. MAHONEY, M.D.

H. C. MERILLAT, M.D.

G. R. ROUSH, M.D.

LEO B. SEDLACEK, M.D.

SUBCOMMITTEE ON INDUSTRIAL HEALTH

During the year 1953, the Subcommittee on Industrial Health held five meetings. Three meetings had to be canceled due to bad weather. The over-all program planning for the Industrial Health Committee is in the initial stages. Our planning, to date, has consisted of formulating four leading objectives.

1. The setting up of industrial health institutes. These are to be one day meetings, held in five different cities throughout the state. They are to be sponsored jointly by the Subcommittee on Industrial Health and the State Department of Health. Each institute would consist of medical men, nurses, industrial managers and labor. The meeting itself would run from approx-

imately 4:00 p. m. to 9:00 or 9:30 p. m. At the present time, the financial aspect of the institutes is being debated. Mr. Campbell, the engineer for the State Department of Health, has assured us that the Department will participate in the backing of these institutes, but of course the change in national administration has cut the support to the state health departments. It is now a problem as to how far the Department can go.

2. The preparation of a booklet governing standard procedures for industrial nurses. This booklet will be designed particularly for small plants without full-time medical supervision. Again, this booklet is being prepared in conjunction with the State Department of Health, and here again, the problem of financing enters in. The preparation of the booklet is now in the final stages.

3. A study regarding industrial compensations, or fee schedules. At the present time we are conducting a survey of the other state medical societies in our immediate vicinity. We have received answers from many of these, and the judgment of the Committee will probably be swayed by the experience of larger, more industrialized states in our vicinity.

4. The coordination of the Subcommittee on Industrial Health with other committees of the State Society. We are particularly interested in meeting with the Subcommittee on Mental Health and the Subcommittee on Rehabilitation.

R. F. FRECH, M.D., *Chairman*.

SUBCOMMITTEE ON NATIONAL HEALTH ASSOCIATIONS

A meeting of the Subcommittee on National Health Associations of the Committee on Public Health of the Iowa State Medical Society has held on July 29, 1953, at Iowa City. Those present were: Drs. Ralph H. Heeren, Des Moines, Chairman; Franklin H. Top, Iowa City; Ralph E. Smiley, Mason City; L. E. January, Iowa City; Leon J. Galinsky, Des Moines; and Wm. Spear, Oakdale.

At the request of the chairman, Dr. January discussed the activities of the Heart Association, which began in 1948 as a cooperative program in fund-raising and staff operation with the State Tuberculosis and Health Association. The activities at the local level are educational in nature and operate through a Heart Committee connected with the Tuberculosis and Health Association in each county. The educational activities are planned to operate through the public schools, with moving picture films, speakers, and through the State Agricultural Extension Service, particularly in helping farm housewives with cardiac disabilities in reducing their household activities to a minimum. There has also been one radio program on work-simplification on the farm, and there was a story in WALLACES' FARMER on work simplification for the farmer who has cardiac disability. The Heart Association acts in an advisory capacity with the rehabilitation services of the state in specific instances where rehabilitation of cardiacs is concerned. In the field of professional education, when something particularly related to heart disease is available, the Iowa Heart Association distributes pamphlets and booklets regularly to its members in specialty branches in the field of medicine. It is expected that within the next few months the Iowa Heart Association will furnish prescription cards by which physicians may request instructive pamphlets to be mailed to certain patients.

The Association furnishes to all senior and junior medical students, "Modern Concepts of Cardiovascular Disease," a publication of the American Heart Association, and it also cooperates with the State Department of Health in "The Heart Bulletin," designed for education of the physician in the subject of heart disease and distributed to all doctors in the State of Iowa. It also handles the subscriptions to the American Heart Association "Circulation" and "Circulation Research," which are published for the medical profession. The Association has a listing of all available films for professional education which can be supplied from its Des Moines office, and of others, with the source from which each may be secured. Help will be extended to city or county organizations in producing heart-disease programs of lay or professional types. It is hoped within the coming years a program of lay education concerning heart disease can be developed.

The Trudeau Society, the scientific organization of the State Tuberculosis and Health Association, attempts to conduct professional education at its semi-annual meetings, and in association with other groups presents postgraduate courses. The Trudeau organization hopes to promote research on tuberculosis in the State of Iowa, and is interested in the statewide coordination of tuberculosis services, detection and treatment of tuberculosis both among the general population of the State of Iowa and among the inmates of the institutions which are under the State Board of Control.

It was brought out that numerous good programs had been poorly attended by the doctors of the state in the past, and the chairman was requested to ask that the Publication Committee consider use of a page in the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY for announcements of scientific programs of the various state meetings sponsored or contributed to by voluntary health agencies.

There was discussion of the importance of organizing a plan to coordinate postgraduate medical education in the State of Iowa. By suitable arrangements there could be made available better programs for the benefit of more doctors of medicine, suitably spaced as to time and place. There could also be a reduction in the number of meetings and an improvement in the quality of those that are carried on. These arrangements could include the scientific meetings of the voluntary health agencies, the University Medical School, the State Medical Society, with its various specialty groups, and the State Department of Health.

The functions of the State Tuberculosis and Health Association were discussed. Mention was made of the joint program of the State Department of Health and the State Tuberculosis and Health Association in the county-wide chest x-ray program and the need for a suitable study to guide the future of case-finding in tuberculosis. There was discussion of the value of the social service and legal-interpretation activity to local county boards of supervisors. Mention was made of the value of the legislative activity of the tuberculosis group at the last legislative session, in improving the budget position of the tuberculosis division of the State Department of Health. The need for a head of the tuberculosis control program in Iowa was expressed.

The Committee generally conceded the importance of the promotion by the State Medical Society of the development of multi-county health units. Mention was made of the difficulty of convincing local doctors of the value of the sort of service provided by these

agencies. Instances were cited where public opinion for the improvement of health conditions is sometimes necessary to bring the doctors around to accept the benefits of the Public Health Services. The acceptance by the doctors of Des Moines County of the health unit was cited.

RALPH H. HEEREN, M.D., *Chairman.*

SUBCOMMITTEE ON RURAL HEALTH

This Committee is completing its second year. During the period since its organization it has devoted most of its attention to the determination of its immediate and long range objectives. Inasmuch as "rural health" in Iowa encompasses the majority of all health problems, it was deemed desirable to focus attention first upon the most pressing ones. These were resolved into three principal categories: 1. To develop and cultivate friendly cooperation between the rural people and the physicians. 2. To encourage young physicians to locate in the smaller communities of the state, where there is inadequate medical coverage. 3. To encourage each county society of the state to develop an emergency-call system which will assure the rural dweller of prompt medical coverage at all times.

In the first field of endeavor, liaison and friendly relations have been established with the officers of farm organizations of the state. The committee's efforts have been particularly successful as regards the Farm Bureau. Representatives of the Committee participated in the meeting of the American Country Life Association, and the chairman of the Committee represented the State Society at the Ninth National Conference on Rural Health, in Dallas, Texas.

The Rural Health Committee has gradually assumed the function of physician placement. Communities which are attempting to acquire a physician are referred to this Committee. Adequate investigation and evaluation of the needs of these localities entails much work. It is therefore recommended that three additional members be given to this Committee. The preceptorship program for medical students of the University College of Medicine will eventually develop more doctors to fill the needs of the rural areas. In the interim, the Committee is considering the best method for teaching rural people how to use those doctors who are now available. We are aware of the fact that modern communication and transportation make medical attention more rapidly available to most rural families than it is to their city-dwelling neighbors.

This Committee has corresponded with each county medical society in the state, recommending the development of an emergency-call system by each county and/or community, in order to assure prompt and adequate emergency medical service to those people who are unable to contact their regular physician, or who are transients. The circulation of a single story that a doctor could not be obtained at the time of an emergency can do medicine great harm. Return correspondence indicates that in an encouraging number of localities emergency-call systems are now functioning.

BRUCE F. HOWAR, M.D., *Chairman.*

COMMITTEE ON HEALTH EDUCATION

This year the Health Education Committee's principal activities have been aimed toward cooperating with the State Department of Health's Health Education Committee in presenting a series of health work

shops. The first of these was held at Drake University, in June. Your Society's Health Education Committee selected the members who appeared there. The program was deemed to be very good, but there seemed to be an apparent lack of interest as shown by poor attendance at the individual sessions. (There was a total registration of 122 people, but an average session attendance of about 35 people).

In an attempt to hold his Health Workshops together, Mr. L. C. Murray decided to hold one-day sessions in various parts of the state in the fall. They were held in Guthrie Center, Mt. Pleasant, Cedar Rapids, Storm Lake and Red Oak. Again the Health Education Committee of the Iowa State Medical Society arranged for speakers at these programs and in my opinion the programs themselves were excellently presented, but again there was a poor attendance on the part of the people in the localities where the programs were given. (Average registration 50 to 65, average session attendance 35 to 50).

JOHN J. SHURTS, M.D., *Chairman*.

COMMITTEE ON MEDICAL SERVICE

In 1953 the old Committee on Medical Service was assigned direction of policies and procedures relative to medical insurance, social agencies, veterans' medical care, industrial medicine and doctor-hospital relations. The many other duties which the Committee had performed during the past ten years are now distributed among several other committees especially selected for the specific problems. During the past ten years the accomplishments of the old Committee have been many, and we claim originality for many of them because we were the first in the United States both to recognize the need for them and to achieve them. The old Committee got its start when there were no precedents in the country and the field had not been developed to the efficiency of today. Among our best enterprises—ones which are still flourishing—are the doctors' secretaries' classes, the doctor-pharmacist co-operation project, the physicians' code for cooperation with press, radio and television, the program for improvement in doctor-patient relations, the scheme for rural health education, and other projects concerning the business side of medicine.

This year we are proud to call your attention to the Iowa State Medical Society's Handbook of Resources Available to Physicians, which is now in the process of being printed and will undoubtedly be in your hands by the time this report is read. This manual has been the dream of this Committee since 1948, when the Polk County Society, on the suggestion and with the guidance of this Committee, published a much smaller and less complete pamphlet on this subject. Our larger and more complete book was made possible by the generosity of Mr. Don Taylor and Mr. Edward Hamilton, of our state office, who contributed generously of their spare time in gathering data and editing, a task which none of us heretofore had either time or ability to accomplish.

We are grateful to the Trustees, who believed that this book would be of sufficient value to the physicians of Iowa to justify the Society's paying for the printing and distribution of these volumes. The book contains as much information as it has been possible to get together at this time and covers a multitude of problems which arise from time to time in the course of a physician's practice. We hope it will prove of sufficient value to be re-edited and improved upon about

once in every three years, or oftener if necessary. Since no such manual exists anywhere in the U. S., we have had no model to follow, and only experience will dictate how we can improve on what we already have.

Each of our subcommittees has been active during the year, and, likewise, they have had some important problems to solve. Dr. Stark's division has had many meetings for the consideration of the payments that insurance companies, particularly Blue Cross, have been making to hospitals for medical care, as distinct from hospitalization. Dr. McCarthy's group has been actively watching the changing procedures in the medical aid to old age recipients and dependent children. The Subcommittee on Labor and Industry, headed by Dr. T. D. Throckmorton has been asked to develop a statement of ethics to govern relations between private practitioners and industrial physicians. Dr. Gutch's Subcommittee on Veterans' Affairs has had more than a busy year watching developments in the AMA's campaign to have non-service-connected-disability hospital and medical care discontinued in our Veterans Hospitals.

This has been a very pleasant year for all of us. The work has been interesting, and there is much yet unaccomplished. The members have responded to every request to work, and we hope our efforts will contribute a little, at least, to the betterment of medicine in Iowa.

FRED STERNAGEL, M.D., *Chairman*.

SUBCOMMITTEE ON INSURANCE

During the year 1953, Iowa Medical Service (Blue Shield) maintained a fairly steady growth, though a less impressive one than during the preceding years. The membership was increased by 43,306, so that we closed the year with an enrollment of 436,307 members.

The earned income for the year was \$4,392,772.05, as compared with the \$3,468,629.69 for 1952. Payments for physicians' services totaled \$3,756,768.68, an increase of \$1,008,598.47 over the amount paid by the Plan in 1952. The reserve for incurred and unreported claims for physicians' services was increased nearly \$120,000 during the year. The percentage of claims incurred to earned income was 88.25 per cent for the year, which indicates an incidence of utilization greater than was anticipated and results in a net operating loss from underwriting operations of approximately \$42,000. Part of this loss was offset by income from our invested reserves, so that there was a final net loss for the year of no more than approximately \$26,000.

The increased utilization was consistently higher, month by month, during the first nine months of the year, causing considerable concern to your Board of Directors. The trend reversed itself during the last three months of the year, to some extent, but we still had a net loss and were unable to increase our contingency reserve because of this high utilization. To have kept the Plan on its normal rate of growth and rate of addition to reserves, we should have shown sufficient gain from operations to add \$220,000 to our reserve.

Several changes took place during the year, the most important of which was the new Blue Shield Plan introduced on April 1, 1953. The new contract, culminating several months of intense study and planning, provided increased benefits for hospitalized medical care, radiation therapy, diagnostic x-ray examinations, anesthesia benefits, and a revised and enlarged

fee schedule which incorporated several increases in surgical fees. The monthly rate for the new contract was increased, and groups and individuals were gradually changed over, so that, by the end of the year, about 70 per cent of the membership were on the new contract and the balance were to be changed during the first few months of 1954.

During the year, through the offices of the Iowa State Medical Society, the Board of Directors appointed a Blue Shield liaison physician for each county medical society. In October, a report was given at a meeting held for the presidents, secretaries, and liaison physicians to point out the closeness between Blue Shield and the county medical societies. A close liaison was maintained throughout the year with the officers, staff and Executive Council of the Iowa State Medical Society. Many problems were discussed jointly at various times.

The administrative staff has had consistently increasing responsibilities and has met them well. The staff is headed by W. H. Sherin, Executive Director; Tom Garbett, Director of Claim Department; W. Bryon Recknor, Assistant Director of Claims Department; Dr. Daniel W. Coughlan, Medical Advisor and Consultant; Mrs. Eleanor Roberts, Supervisor of Accounting Department; and Donald L. Taylor, Director of Physician Relations. Beginning February 1, 1954, Wilbur R. Quinn will be the Director of Physician Relations, replacing Mr. Taylor, who has served the Plan well, but now has a full-time responsibility as Executive Secretary of the Iowa State Medical Society.

In addition to the administrative staff, there are 35 full-time employees. The handling of claims constitutes probably the major, and certainly the most difficult, function in the office. We receive and service an average of nearly 600 Doctor's Service Reports each working day, and on some days over 900 Reports. During the year, we shifted from the individual check payment to a monthly check payment to the participating physicians. After three months on the monthly check basis, we began paying the participating physicians semi-monthly. This change in procedure has provided a more efficient operation, and met with the approval of the participating physicians.

Many changes are taking place, and rapid development is being made in the field of hospital and medical care. Growth of the voluntary-prepayment movement has been phenomenal to a point where a large proportion of the population has coverage for hospital and medical care. The insurance companies have aggressively entered the field of health insurance, they have developed contracts with benefits and rates which compare quite favorably with our own, and they are making an active and strong bid for their portion of the business. Instead of the easy enrollment of a few years ago, we now find it necessary to make an active effort for the business, both to hold and maintain groups already on our books and to extend membership by enrolling new groups and individuals.

There is danger that hospital and medical care plans may lose sight of the primary purpose for which they came into being, namely, that of supplying good medical care at a price the public can afford—providing a medium by which people with lower incomes can budget for the cost of illness within their own families. The public constantly demands more and greater benefits so that they may truly prepay their medical care. As sponsors of the voluntary non-profit plans, we in the profession must not lose sight of the service and social aspects of the Blue Shield type of

organization. Only by keeping in mind the primary objective in organizing and developing our Plan and by lending full support and loyalty to the Plan, can we hope to fulfill its main purpose.

MARTIN I. OLSEN, M.D., *Chairman.*

SUBCOMMITTEE ON VETERANS' AFFAIRS

In June, 1953, the House of Delegates of the American Medical Association directed the Council on Medical Service to conduct a campaign against federal hospital and medical care to veterans for non-service-connected disabilities. This Committee had representatives at a meeting in Chicago, on September 1, 1953, when the Committee on Federal Medicine of the AMA announced its plan to conduct this campaign on the grass-roots level by soliciting participation from local county medical societies. We were furnished with a packet of literature outlining the plans and facts, and have from time to time received more literature from the AMA on the subject. This Committee had a meeting in September for consideration of this subject, another one in October, when it was taken up at the Presidents' and Secretaries' Conference, and again in St. Paul, in November, at the North Central Conference.

Information received to date indicates that the AMA plans to conduct this program over a period of two or three years if necessary, and, from what we can learn, it is not yet entirely under way. We are now waiting for the instructions we may receive at the regional meeting of the AMA on this subject, February 28, at Omaha, Nebraska. Last fall, four AMA regional conferences on veterans with non-service-connected disabilities were held in Dallas, Atlanta, New York City, and Washington, D. C. Apparently the remaining areas of the U. S. are to be covered this spring. Because we have so little information on the actual plan for the campaign, we shall probably have to make a supplementary oral report to the House of Delegates in April to bring you up to date.

This campaign promises to be the biggest undertaking in the political field since the one in opposition to socialized medicine. If the program as planned is carried out, it will mean a tremendous job for every county unit, and in the course of it, we shall often find ourselves embarrassed unless we are prepared.

R. C. GUTCH, M.D., *Chairman.*

SUBCOMMITTEE ON HOSPITAL AND PROFESSIONAL RELATIONS

The Subcommittee on Hospital and Professional Relations submits the following report of its activities during the past year.

Our first meeting was held in July at the office of the Iowa State Medical Society. It was primarily an orientation meeting, since all but one of the members were new. The Committee was brought up to date on past activities. New problems were considered, such as aid to State Mental Institutions by medical doctors in neighboring communities, as well as the report and recommendations of the Joint Committee of the Board of Trustees of the American Medical Association and the American Hospital Association.

These subjects were to be the main agenda for our next meeting, but we were confronted with a more important problem and reconvened December 9, 1953, together with members of the Iowa Radiological, An-

esthesiological, and pathological Societies to discuss in detail the problems presented by the Iowa Blue Cross Comprehensive 70 Contract and to follow through with recommendations similar to those which this Committee presented for action by the Executive Council in 1952. All groups concerned presented resolutions specifically stating their conviction that those recommendations be carried out.

On January 7, 1954, the committee members were guests of the Judicial Council, at which time we presented a supplement to the report submitted following our meeting of December 9, 1953. Members of the Committee also collaborated with Dr. Caughlan in formulating a resolution which was presented at this meeting. Both of these reports will, I understand, be printed in the IOWA STATE MEDICAL SOCIETY JOURNAL.

The chairman of this Committee wishes to take this opportunity to thank the members of the committee for their cooperation and patience while it was adjusting itself to this all-important change in policy of members of our profession.

C. H. STARK, M.D., *Chairman*.

COMMITTEE ON PUBLIC RELATIONS

The Committee on Public Relations has held three meetings during the past year, at which time the following projects were considered and recommended to the Executive Council of the State Medical Society.

1. A public opinion poll, covering the whole state. Recommendation was made that this might be one way of obtaining information on how we look to the public. It was recommended that the Board of Trustees and Executive Council consider the matter in setting up the budget for next year.

2. Publication of medical articles in the lay press. Considerable effort is being put forth in placing two articles a month in the WALLACES' FARMER, and it was recommended that this activity be continued.

3. Press relations. The Committee feels that the favorable results of the liaison effort between the public-press and the secretary, Mr. Don Taylor, is worthy of praise and commendation.

4. Average fee schedule. It is felt that this is an extremely important proposal, and further efforts should be made that every single county in the State Society put out a new fee schedule, based on recent fees, and that the title be "Average Fee Schedule."

5. Itemized bills. It is the consensus of the members of the Committee that all bills should be itemized, so that the patient can see the charge on each item of service rendered him. It is pointed out that often this will save a great deal of ill will.

6. Display of plaques. It is recommended by the Committee that every doctor in the State of Iowa have the plaque inviting the patient to discuss fees put out by the AMA placed in his office. With the help of Blue Shield physician relations men, every doctor will be offered a chance to buy such a plaque.

7. Public Health Forums. Forums, such as the ones that were held during 1953 in Scott County, have been considered, and it was recommended that other counties follow with the use of some type of forum. It is felt that the public interest in such programs is high and that they have been most successful.

8. Indoctrination meeting. The matter of greatest concern, perhaps, has been the recommendation to the Board of Trustees that an indoctrination meeting be held yearly, for all new members of the State Society. It is felt that at such a meeting doctors will be able

to become acquainted with the State Medical Society, and in addition, the talking over of such things as public relations and fees at such a gathering can be of great value to all new practitioners of medicine. It was decided that such annual indoctrination meetings should be held, beginning sometime in 1954, and that the following yearly meetings should be held in September or October.

9. Establishment of contact with the internes and senior students in the medical school. Details of such a plan are being considered, and will be further considered at future meetings.

It is the opinion of the Committee that there are many factors in public relations that are important, and should receive due consideration from all members of the State Society. The manner of best informing the members of the State Society is perhaps the most difficult question to answer.

OTTO N. GLESNE, M.D., *Chairman*.

SUBCOMMITTEE ON INTER-PROFESSIONAL RELATIONS

This Subcommittee and the Committee on Public Relations met in July 1953 at the Iowa State Medical Building, with Doctor Glesne, the chairman of Committee on Public Relations in charge. Our relationship with the other societies was discussed at this meeting, along with several other pertinent subjects.

On September 13, the Subcommittee on Inter-Professional Relations, consisting of Doctors F. M. Berguson, E. J. Boyd, and me, met with the Iowa Inter-Professional Association at the Iowa State Medical Society Building. At that time, meeting places for several Inter-Professional meetings were planned and approved. The meetings were located in Mason City, Decorah, Cedar Rapids, Mount Pleasant, Atlantic, Spencer and Fort Dodge. It was the duty of our Committee to procure speakers from the medical profession for the meetings, and this was done.

JOE G. FELLOWS, M.D., *Chairman*.

PUBLIC EDUCATION SUBCOMMITTEE

The Public Education Subcommittee, a part of the Public Relations Committee, was organized and began functioning July 29, 1953, at a meeting in Des Moines.

Beginning on October 3, 1953, for the first time WALLACES' FARMER has been publishing a bi-weekly series of health articles prepared by Iowa physicians under the sponsorship of the Iowa State Medical Society. By the time of the annual meeting, we shall have published 15 articles. Subjects chosen were the results of the combined thinking of your Committee, the editors of WALLACES' FARMER and the Woman's Auxiliary of the Farm Bureau. The articles were assigned to various men throughout the state, and their cooperation is much appreciated.

The television programs have been meeting with increased beneficial response. After a summer vacation, we started telecasting weekly, instead of every other week as we had done. Our first program this season was telecast on October 2, 1953, and by the time of the annual meeting we shall have produced 30 programs. Due to the resignation of our able general manager, Dr. R. D. Bernard, Mr. Donald L. Taylor, the Executive Secretary, is now in charge of the WOI-TV programs, and it is hoped that when satisfactory kinescopes can be made, the TV programs will be carried by other stations throughout the state.

I wish to thank the members of this Committee for their able assistance and quick responses in the accomplishment of the above.

D. F. WARD, M.D., *Chairman*.

Reports of Special Committees

BALDRIDGE-BEYE MEMORIAL COMMITTEE

The Baldrige-Beye Committee had applications for only two loans during the year 1953: Mr. Holloway for \$500 and Mr. Hesse for \$128. These applications were approved by the Committee, and a request that the loans be made was sent to the Board of Trustees through Miss Mary McCord.

It is the feeling of the chairman of the Committee that, although heavily used at first, the fund is not being used sufficiently at present to warrant its continued availability. Thus, some other disposition should be made of the funds collected for this purpose.

It is also the feeling of the chairman that since the members of this Committee do nothing more than approve applications for an occasional loan, the entire function be placed in the hands of the Board of Trustees, who already handle the arrangements for the loans and all financial dealings directly with the applicant if the loan is granted. The Committee itself never knows whether funds are available or have been exhausted at any given time, and it would save a great deal of time and trouble if the applicants dealt directly with the ones who handle almost the entire transaction. This is, of course, based on the supposition that the fund is still available in the future for loans to worthy medical students.

J. W. AGNEW, M.D., *Chairman*.

OSTEOPATHIC COMMITTEE

This Committee has met on several occasions the past year for the purpose of going over the questions raised locally and nationally. As you are aware, the Cline Committee of the AMA brought the problem to the front in Chicago, in 1952. It made a report before the House of Delegates in New York, in 1953, which did not exactly settle anything, and which your Committee did not feel was based on an entirely adequate investigation.

In June, this year, the Cline Report will again be brought before the delegates of the AMA for action. Each member of this Committee of your State Society had some slightly divergent views, making a unanimous opinion difficult. Thus we sent out to each of you a questionnaire, to poll the opinion of the membership. Time did not allow the results to be printed here, but they will be given in a supplemental oral report. The purpose of this poll is to enable our House of Delegates to provide our delegates to the AMA with the consensus of as near the entire membership as possible on these important questions.

Dr. E. G. Zimmerer met with your Committee on one occasion in the past year to clarify the fact that the State Board of Health has no control over the allotment of federal research funds to Still College.

During this past year the Committee has studied the academic background of Still College as well as it could. It has also assisted the medical staffs of several county hospitals over the state in formulating their rules and the qualifications of their members. The fact is increasingly apparent, and has been proved in sev-

eral communities, that when the medical men work together and maintain the level of medical practice for which they have been trained, osteopathic competition rapidly vanishes.

JOHN D. CONNER, M.D., *Chairman*.

COMMITTEE ON NATIONAL EMERGENCY MEDICAL SERVICE

The Committee on National Emergency Medical Service has not been active this year. It stands ready to assist the State Civil Defense Commission when such assistance is needed.

JOHN W. FERGUSON, M.D., *Chairman*.

COMMITTEE ON NURSING EDUCATION AND NURSING SERVICE

Up to the time of this report, the special Committee on Nursing Education and Nursing Service has held one meeting. Prior to that one meeting a brochure was sent to each member containing a statement of the aims of the Committee and the work that has been done by similar committees in other states, as well as Dr. R. F. Birge's summary of proceedings at the Fourteen-State Conference held in Kansas City, on March 1, 1953.

The Committee met at the State Medical Society offices on August 27, 1953. Members present were Dr. C. V. Edwards, Dr. J. H. Henkin, Dr. R. F. Birge and Dr. E. P. Lovejoy. Dr. J. E. Houlahan was unable to attend.

Dr. R. D. Bernard oriented the members of the Committee on the work that had been done previously as regards nursing education and service, and the attitudes of the nursing associations and the College of Nursing at the University of Iowa in regard to practical-nurse training.

Following this, each member discussed briefly the use of practical nurses and lay help in his own community and, to some extent, the attitudes of hospital administrations and nursing groups. It was decided that the present shortage of nurses is due to the following causes.

1. A greatly increased demand for nurses resulting from:
 - (a) Marked increase in number of hospital beds.
 - (b) Increase in hospitalization resulting from increased prepaid hospital insurance.
 - (c) Expanded Veterans Administration care.
2. Changes in nursing education so that very little bedside nursing is now done by student nurses.
3. Advent of the 40 or 44 hour work week for nurses.

Furthermore, it was decided that all of these causes were here to stay and that means should be found to increase the available nurse supply.

After this preliminary discussion, Miss Norelinus, Secretary of the Iowa State Nursing Association, was invited to join the meeting and explain the present situation in Iowa in regard to practical nursing. She discussed methods and requirements in regard to licensing, the duties and responsibilities of practical nurses and the attitude of the professional nursing associations in regard to them.

No further conclusions were reached at this first meeting.

On November 19, 1953, the Committee was represented at the annual meeting of the Iowa Health Coun-

cil. There, information was obtained on the progress of professional and practical nurse education in Iowa, as well as the activities of the county health councils in the recruitment of nurses.

It was planned to have a representative of the Committee attend the 1954 meeting of the Fourteen State Conference, scheduled for January 10 in Kansas City, after which a second and final committee meeting would be held. However, the Fourteen State Conference was cancelled.

Another meeting of the Committee is tentatively planned for late February or early March.

E. P. LOVEJOY, M.D., *Chairman*.

HISTORICAL COMMITTEE

Some months ago Dr. W. L. Bierring resigned as chairman and member of the Committee. The trustees appointed the undersigned to complete the term until the next meeting of the House of Delegates. The Committee has prepared several short stories of Iowa medical history for publication in the JOURNAL. It is understood that these articles will be published during the current year.

C. A. BOICE, M.D., *Chairman*.

SPECIAL COMMITTEE TO STUDY GROUP INSURANCE

Various group-insurance plans have been studied with the purpose of clarifying their mutual differences, in order that, should the Society be interested, the best interests of the members might be served.

Dr. A. E. Johann, before his resignation as chairman of the Committee, got in touch with several interested insurance companies. He also obtained reports from other state medical societies and comparable groups about the feasibility, effectiveness and ease of administration of their particular plans.

Mr. W. G. Schneider, Group Underwriting Secretary for the Bankers Life Company of Iowa, has reviewed the detailed quotations from three companies, and has made recommendations and has posed certain questions that should be answered before any definite steps are taken by the Society. He has contrasted the plans on the basis of:

1. Benefits offered.
2. Enrollment, limits and underwriting.
3. Annual cost of benefits.
4. Services offered.

Both Dr. Johann and Mr. Schneider have spent considerable time and effort in gathering and appraising the material submitted to date. The Committee must now determine the interest of the members of the Society in such group insurance, and then review in detail with company representatives a final plan and procedure of solicitation.

GEORGE G. YOUNG, M.D., *Chairman*.

REPORT OF THE SPEAKERS BUREAU COMMITTEE

The activities of the Speakers Bureau have included lay group meetings, county medical meetings, radio programs, and cancer clinics.

Our doctors attended seven lay meetings and seven county medical meetings. When requests for speakers are sent to the Speakers Bureau, we send out a speaker who is qualified on the subject the group wants

discussed. We also try to send out the doctor who has to travel the shortest distance to any particular group.

Our health programs are broadcast over WOI, Ames, on Thursdays at 11:15 a.m. and over WSUI, Iowa City, on Tuesdays at 11:45 a.m. The programs are on platters sent to us by the American Medical Association. Each program is 15 minutes long, with 13 programs in a series.

Five cancer clinics have been held. The dates and towns are as follows:

October 21—New Hampton
November 10—Grinnell
November 12—Storm Lake
November 19—Ottumwa
March 29—Ames

We plan to have one or two more of these cancer clinics before the end of the year.

In 1954 our lay activities are being expanded and our services to county medical societies continued.

R. B. STICKLER, M.D., *Chairman*.

PUBLICATION COMMITTEE

The 1953 JOURNAL continued with the presentation of articles delivered at the annual meeting of the Society, together with case reports contributed by Iowa physicians. As regards the reading matter that it presented, its most noteworthy departure from precedent was in publishing increased amounts of organizational and political news. The recent increase in the Society's committee activities and the importance of medical legislation under consideration, both in Des Moines and in Washington, have justified—indeed have necessitated—more nearly complete reporting. When, with the resignation of Dr. Bernard and the discontinuation of the position he held with the Society, the JOURNAL no longer had occasion for scheduling a "General Manager's Page," the editors had some additional space to allocate and began planning an expanded coverage of medical news and the setting up of a calendar of coming meetings such as had been asked for by the Committee on National Health Agencies. In addition, the Washington Office of the AMA announced its intention of beginning, in January, 1954, to provide our JOURNAL, along with similar publications, with a monthly "Washington Report," a feature which we are sure the membership will find a worthwhile service.

National advertising, which the JOURNAL secures through the State Journal Advertising Bureau of the AMA, appeared to be on the increase at the end of 1953. The Trustees asked that we accept a remunerative contract for the insertion of four pages of advertising to be located in the center fold of each 1954 issue, and prosperity—along, perhaps, with the belated realization that state-journal advertising is probably the most efficient means of introducing pharmaceutical products to physicians—is causing increasing numbers of firms to buy full-page ads and two-page spreads, many of them in color.

The securing of local advertising remains a problem, though it is less serious than it might be if national advertising weren't headed for an all-time high. At the direction of the Board of Trustees, the Committee sought to interest an Iowa firm in securing local ads. Only one company was willing even to discuss the possibilities, and that one indicated interest in working with us only if we would allow a 33 1/3 per cent agency commission or would raise our rates. The for-

mer alternative, we believed, would leave us too narrow a margin after paying printing costs, and the latter was impracticable, since we are bound to a fixed schedule by the State Journal Advertising Bureau. Furthermore, the Committee felt that delegating the solicitation of advertising to a commercial agency might cause some difficulties. For example, representatives of advertisers so obtained would almost certainly cause us embarrassment by giving their prospective customers the impression that our printing their ads constituted an endorsement of their products or services.

In the make-up of the JOURNAL, two changes were planned for introduction early in 1954. For more attractive display, the titles of scientific articles are henceforth to be printed across the page, rather than in a single column. And, partially for the sake of appearance, but also to lead increased numbers of readers to peruse the smaller advertisements, certain materials of current, rather than permanent, interest, such as the "Washington Report" and the "Personals," are to be printed on pages that either carry or face advertising matter.

	1951	1952	1953
Reading Pages	528	604	534
Advertising Pages	444	444	406
Percentage of Reading Pages .	54.3%	57.6%	56.8%
Original Articles	68	71	69
Editorials	60	60	68
Total Journal Expenditures ...	\$25,803.36	\$27,706.28	\$25,475.40
Total Journal Income	\$18,129.17	\$20,173.56	\$17,185.84
Number of			
State Society Members	2,463	2,489	2,481
Net Expenditure per member ..	\$3.12	\$3.03	\$3.34

Though the figures relating to the JOURNAL in the Treasurer's Report do not, the above statements regarding expenditures include the salaries and proportional shares of salaries of the staff members who edit and publish it.

E. M. GEORGE, M.D., *Editor*.

(The proceedings of the House of Delegates were interrupted in order to present the handbook reports. At this point we return to the minutes of the Sunday afternoon session.)

As a part of the Public Health Committee's report, Dr. E. G. Zimmerer, Iowa Commissioner of Health, was introduced and asked to deliver remarks. He stated that, to his knowledge, this was the first time the Commissioner of Health was asked to appear before the House of Delegates. He expressed appreciation for the opportunity and proceeded to explain the work of the Board of Health and the Department of Health. In his closing remarks, the Health Commissioner stated, "It is my earnest hope that we may continue to improve the entente which now exists between us, to the end that public health in Iowa may continue to improve. I solicit your understanding and your realization that a public health department cannot always do as it likes, or hope to please everyone. It must exercise its authority justly and equitably, but always, I hope, with kindness. If, as must occasionally happen, differences of opinion arise, give us a chance to explain, and rest assured that as doctors, your interests are ours. If we make mistakes, they are of the head, and not of the heart."

Supplemental reports were presented from the following committees and officers: Board of Trustees, Legislative, Medical Education and Hospitals, Grievance, Mental Health, Industrial Health, Medical Service, Insurance. And a special report was presented from the Blue Cross-Blue Shield Committee. These re-

ports will be presented in summary form later in this résumé.

Dr. George Scanlon, Iowa City, was invited by the chairman of the Board of Trustees to present a report on the status of the ISMS Educational Fund. Dr. Scanlon announced that the Fund had lent about \$45,000 to deserving students during the past two years. He spoke of some difficulty in raising funds and solicited increased support of the educational program by members of the ISMS.

Dr. Norman B. Nelson, Iowa City, Dean of the College of Medicine, was introduced by Dr. B. T. Whitaker, Boone, after completion of the presentation of the supplemental report of the Committee on Medical Education and Hospitals. In Dr. Nelson's remarks he paid special tribute to Dr. Willis Fowler, Iowa City, for the fine work and leadership which he displayed while serving as chairman of the Dean's Committee of the College of Medicine.

Special committee reports were approved as printed in the Handbook. The following special committees presented supplemental reports: Osteopathic, Nursing Education and Nursing Service, and Special Committee to Study Group Insurance. The House adjourned for dinner at 5 P. M. and reconvened at 7.

The first order of business was the announcement of the names of the physicians to serve on the nominating committee. They were as follows: First District, L. W. Ward, Oelwein; Second District, H. G. Marinos, Mason City; Third District, T. D. Kas, Sutherland; Fourth District, H. E. Farnsworth, Storm Lake; Fifth District, J. D. Conner, Nevada; Sixth District, J. W. Billingsley, Newton; Seventh District, E. F. Van Epps, Iowa City; Eighth, L. H. Pumphrey, Keokuk; Ninth, E. A. Larsen, Centerville; Tenth, H. J. Peggs, Creston; Eleventh, C. V. Edwards, Council Bluffs.

Nominations for members to serve on the Grievance Committee were called for from the councilors in the uneven numbered districts. Three names were requested from each of the councilors.

Twenty-six physicians were granted life memberships—twenty on the basis of 50 years of practice and 30 years of membership in the ISMS; five on disability; and one on retirement.

PHYSICIANS GRANTED LIFE MEMBERSHIPS

On the basis of 50 years of practice and 30 years of membership:

County	Physicians
Adair	Arthur S. Bowers, Orient
Black Hawk	Robert B. Fields, LaPorte City
Buena Vista	James H. O'Donoghue, Storm Lake
Hardin	Rasmus R. Gaard, Radcliffe
Jones	Thomas M. Redmond, Monticello
Lee	William Rankin, Keokuk
Linn	Cass T. Houser, Cedar Rapids Harry J. Jones, Cedar Rapids Agnes I. Safely, Cedar Rapids
Montgomery	Jay C. Cooper, Villisca
Page	Edward Luke, Coin
Polk	Frank E. Foulk, Des Moines Arthur M. Merritt, Des Moines

Martin I. Olsen, Des Moines
 Alfred S. Price, Des Moines

Scott James Dunn, Davenport
 Raymond R. Kulp, Davenport
 John C. Teufel, Davenport

Wapello Frederick L. Nelson, Ottumwa

Washington William S. Kyle, Washington

On the basis of disability:

Marion Corwin S. Cornell, Knoxville

Polk Russell C. Doolittle, Des Moines
 Lawrence E. Kelley, Des Moines
 Emery W. Lehman, Des Moines

Wapello Jesse C. Moore, Eldon

On the basis of retirement:

Polk Daniel J. Glomset, Des Moines

Dr. John H. Chittum, Wapello, was nominated for the 1954 outstanding general practitioner award by the delegate from Louisa county.

Under the heading of new business, 12 resolutions were introduced and referred to reference committees. The House of Delegates adjourned at about 8:30 P. M.

The reference committees which had a great deal of business to consider were asked to meet Sunday night. It was suggested that the others could schedule their meetings beginning at 8:30 Monday morning.

The Wednesday morning session of the House of Delegates was called to order at 7:30 A. M. Roll call by the secretary was the first order of business. Ninety-four delegates and 19 alternates were seated.

WEDNESDAY MORNING SESSION

APRIL 28, 1954

DELEGATES

Adair—A. S. Bowers
 Audubon—H. K. Merselis
 Black Hawk—C. D. Ellyson
 Black Hawk—T. L. Trunnell
 Boone—W. H. Longworth
 Buchanan—R. L. Knipfer
 Buena Vista—H. E. Farnsworth
 Calhoun—Paul Ferguson
 Carroll—J. M. Tierney
 Cass—L. L. Long
 Cerro Gordo—H. G. Marinos
 Chickasaw—M. J. McGrane
 Clarke—H. E. Stroy
 Clay—E. E. Munger, Jr.
 Clayton—P. R. V. Hommel
 Clinton—R. T. Lenaghan
 Clinton—R. F. Luse
 Crawford—J. M. Hennessey
 Dallas-Guthrie—W. A. Castles
 Davis—P. T. Meyers
 Delaware—J. E. Tyrrell
 Des Moines—W. R. Lee
 Des Moines—F. G. Ober
 Dubuque—D. C. Conzett
 Dubuque—R. J. McNamara
 Dubuque—D. F. Ward

Emmet—J. L. Powers
 Floyd—J. G. Baumann
 Fremont—Kenneth Murchison
 Grundy—H. V. Kahler
 Hardin—L. F. Parker
 Howard—W. G. Doss
 Ida—W. G. McAllister
 Iowa—C. F. Watts
 Jasper—J. W. Billingsley
 Jefferson—R. A. McGuire
 Johnson—E. J. Boyd
 Johnson—W. H. Flocks
 Johnson—L. H. Jacques
 Johnson—W. Kirkendall
 Johnson—E. W. Paulus
 Johnson—E. F. Van Epps
 Jones—T. M. Redmond
 Kossuth—J. M. Schutter
 Lee—L. C. Pumphrey
 Linn—J. J. Keith
 Linn—J. J. Redmond
 Linn—C. H. Stark
 Lucas—A. L. Yocom
 Madison—I. K. Sayre
 Marshall—D. D. Harris
 Marshall—L. O. Goodman
 Montgomery—E. L. Croxdale
 Muscatine—L. H. Whitmer
 O'Brien—T. D. Kas
 Page—P. L. Spencer
 Palo Alto—G. H. Keeney
 Plymouth—W. L. Downing
 Pocahontas—J. B. Thielen
 Polk—W. D. Abbott
 Polk—M. T. Bates
 Polk—R. F. Birge
 Polk—T. A. Bond
 Polk—F. C. Coleman
 Polk—H. G. Decker
 Polk—R. A. Dorner
 Polk—O. A. Elliott
 Polk—J. T. McMillan
 Polk—G. E. Mountain
 Polk—Fred Sternagel
 Pottawattamie—C. V. Edwards
 Pottawattamie—I. Sternhill
 Pottawattamie—N. D. West
 Poweshiek—J. R. Parish
 Sac—W. I. Evans
 Scott—George Braunlich
 Scott—J. H. Sunderbruch
 Shelby—J. H. Spearing
 Sioux—M. O. Larson
 Story—J. D. Conner
 Tama—C. W. Mapplethorpe, Sr.
 Union—H. J. Peggs
 Van Buren—L. A. Coffin
 Wapello—C. A. Henry
 Wapello—W. C. Wolfe
 Warren—L. E. Hooper
 Washington—D. G. Sattler
 Wayne—C. N. Hyatt
 Webster—C. J. Baker
 Webster—H. H. Allen
 Winneshiek—E. F. Hagen
 Woodbury—E. M. Honke
 Woodbury—A. Q. Johnson
 Woodbury—F. D. McCarthy
 Woodbury—R. C. Mugan
 Wright—G. E. Schnug

APRIL 28, 1954

ALTERNATES

Appanoose—E. A. Larsen
 Black Hawk—C. W. Eller
 Black Hawk—S. G. Loomis
 Cerro Gordo—T. E. Davidson
 Cherokee—J. H. Wise
 Dickinson—T. L. Ward
 Fayette—A. F. Grandinetti
 Hamilton—G. A. Paschal
 Johnson—S. C. Ware
 Linn—E. H. Files
 Mills—D. W. Harman
 Polk—W. M. Myerly
 Polk—W. M. Sproul
 Story—J. G. Fellows
 Woodbury—C. T. Maxwell

The House approved the minutes of the Sunday meeting of the House of Delegates. The Speaker then called for the report of the nominating committee. The following officers were elected. President-elect L. A. Coffin, Farmington; First Vice President C. A. Boice, Washington; Trustees G. H. Scanlon, Iowa City, and Fred Sternagel, West Des Moines; Secretary R. F. Birge, Des Moines; Treasurer N. B. Anderson, Des Moines; Speaker of the House Herman Smith, Des Moines; Vice Speaker T. F. Thornton, Waterloo; Delegate to AMA R. N. Larimer, Sioux City, and F. C. Coleman, Des Moines; Alternate Delegate to AMA F. G. Ober, Burlington, William Sproul, Des Moines, and C. H. Stark, Cedar Rapids; Councilor from the Third District T. L. Ward, Arnolds Park; Fifth District E. M. Kersten, Fort Dodge; Eighth District J. H. Sunderbruch, Davenport; Tenth District Harold Peggs, Creston.

The House of Delegates voted to hold the 1956 annual meeting of the ISMS in Des Moines. The Speaker then called for reports of reference committees.

First to report was the *Reference Committee on Articles of Incorporation and By-laws*.

1. A resolution was introduced by Drs. C. A. Henry and W. C. Wolfe, Wapello county, directing that the transactions of the House of Delegates be published in complete form in the "Official Issue—Desk Copy" of the JOURNAL of the ISMS each year. No members appeared before the committee in support of this resolution. It was the feeling of the reference committee that authority to decide whether the transactions of the House are to be published in full or in condensed form is properly vested in the Board of Trustees as provided in Chapter 10, Article 1, of the By-laws. In the absence of strong support for removing this matter from the discretion of the Board of Trustees, the reference committee recommended that this resolution not be adopted. This recommendation was confirmed by the House.

2. A second resolution from the above named sponsors instructed the Committee on Articles of Incorporation and By-laws of the House to write an amendment to the Constitution empowering each councilor to appoint an alternate to perform all his duties in his absence. No members appeared before the committee in support of this resolution. The committee concluded that, since the councilor is an elected official representing a definite district of the state, and since the duties of the councilor are primarily organizational within his district and judicial within the Council, the

authority and confidence vested in him are personal to him and could not properly be delegated by him to another person. Further, since six of the eleven members of the Council constitute a quorum, the work of the Council would not be seriously hampered by the occasional absence of one member. In view of these circumstances, the reference committee disapproved this resolution and recommended that the status of the councilor remain as it is now outlined in Section 15, Article 4 of the Constitution. The entire report of the reference committee on Articles of Incorporation and By-laws was upheld by the House of Delegates.

Reference Committee on Legislation and Public Relations. Six resolutions were considered by this committee.

1. A resolution introduced by the Webster County Medical Society requested the House of Delegates of the ISMS to take appropriate action to promote the development of a system of qualified medical examiners in the state of Iowa to replace the present coroner system. The reference committee endorsed the resolution and recommended that it be referred to the Legislative Committee for further study.

2. A resolution was introduced from the Dallas-Guthrie County Medical Society requesting the ISMS to favor the enactment by the legislature of the state of a change in the law so as to require a single licensing board for all practitioners of medicine, surgery and other healing arts in the state of Iowa and that such board when established should be composed of not less than five members, the majority of whom should be duly licensed practitioners of medicine and surgery and the minority should be practitioners of the other healing arts now recognized by the state of Iowa. The reference committee endorsed the principle of the resolution and asked that it be referred to the Osteopathic Committee for its action following (a) the action of the AMA on osteopathy, and (b) the necessary conferences between representative of osteopathy, and medicine. The recommendation of the reference committee was approved by the House of Delegates.

3. A resolution was introduced by the delegates from Woodbury County Medical Society pertaining to hospital record committees which have been created as a result of a recommendation of the Joint Commission on Accreditation of Hospitals. The resolution requested the State Medical Society to investigate the true legal status of such record committees. It was the recommendation of the reference committee that the Woodbury County Medical Society resolution be referred to the legal counsel of the ISMS for an opinion. The report of the reference committee was accepted by the House.

4. The reference committee considered the supplemental report on Nursing Education and Nursing Service. In its report, the special committee on nursing introduced six recommendations for consideration of the House, as follows:

a. That the Committee on Nursing Education and Nursing Service be continued as a special committee of the ISMS, and

b. That the committee attempt to find out which, if any, of the professional nursing schools and practical nursing schools in Iowa are not getting as many students as they are able to take, and

c. Since there are only three schools of practical nursing in Iowa, to find out if such schools in neighboring states are below their normal enrollment.

d. The above information having been obtained, we

suggest that the various county auxiliaries be contacted to see if they cannot take steps to stimulate enrollment in both types of schools in their own particular localities.

e. That the committee contact officers of the Iowa Health Council in an attempt to stimulate nurse recruitment by the various County Health Councils also for both types of schools.

f. That the ISMS go on record as approving the establishment of more schools of practical nursing so that they will be distributed throughout more of the state with the idea that those graduates can adequately fill many positions now vacant in the fields of bedside nursing, home nursing and office nursing.

The reference committee approved in principle all of the recommendations "a"—"e" inclusive, but recommended that point "f" above be referred back to the Committee on Nursing Education and Nursing Service for further study and report. The report of the reference committee as presented was approved by the House.

5. The reference committee, after considering the supplemental report of the Legislative Committee, called particular attention to the excellent work of that group. The Legislative Committee report emphasized the importance of active participation of physicians in their local civic and political programs, and the reference committee re-emphasized the importance of this local activity. The report of the reference committee was accepted as presented.

6. The supplemental report of the Grievance Committee urged the House of Delegates to put teeth in the existing act governing nursing homes, stating that the doctors of Iowa are morally responsible for the medical care of those in such institutions and should see to it that conditions there are conducive to good care. The Committee pointed out that the Iowa State Department of Health had issued a booklet outlining the rules, regulations and minimum standards governing the operation of nursing homes in Iowa. It seemed to the Committee that in actuality there are many nursing homes not complying with these rules, regulations and minimum standards. The Committee stated further that we respect those nursing homes which are giving good care to those in residence and are cooperating with the attending physicians. The Committee reported that it had come to its attention that not a few of the nursing homes are rather lax in the determination of responsibility, and that anytime they find a physician present at the home are prone to ask him to provide attention for anybody in need of medical care. Thus, the regular medical attendant of an elderly patient who is admitted to a nursing home may seldom, if ever, be informed of that patient's condition.

After considering the supplemental report, the reference committee offered the following statement: "We accept the supplemental report of the Grievance Committee. However, due to lack of personnel and funds available for the inspection of these institutions, the committee recommends that the local county medical society and public health officers should collaborate in maintaining the rules, regulations and minimum standards as prescribed by the State Department of Health." The Grievance Committee report was approved by the House of Delegates.

The chairman of the reference committee moved the adoption of the report in its entirety, and it was approved by the House.

Reference Committee on Miscellaneous Business. The committee accepted the supplemental report of

the Subcommittee on Industrial Health. The Industrial Health Committee report announced completion of a booklet on standard procedures for nurses in small industries. The book is to be published jointly with the Iowa State Department of Health. The reference committee also accepted the supplemental report of the Subcommittee on Mental Health and urged that each individual physician in the state take greater interest in problems of the interpersonal relationships and mental health of his patients.

The committee considered a resolution from the Davis County Medical Society on the method of distribution and selection of members to serve on state-level committees or to hold state-level offices. The Davis county resolution proposed that by March 1 of each year each county medical society should submit to the secretary of the ISMS a list of its member physicians both willing and able to serve, using as a yardstick the submission of two names for every delegate to the House of Delegates to which that particular county is eligible and entitled. The reference committee recommended acceptance of the resolution in principle, with the exception of the next to last paragraph, which it asked to be stricken. The paragraph which was stricken read as follows: "Resolved that the officers of the Iowa State Medical Society and their appointees be apportioned throughout the 99 counties in keeping with their physician population, and be it further." The reference committee further stated that it recognized these inequalities and urged the officers of the State Medical Society to give this plan a trial for one year, reporting back to the next annual meeting of the House of Delegates as to how successfully this plan had worked. The resolution, as amended, was reported to the House of Delegates and accepted.

The report of the Reference Committee on Miscellaneous Business as a whole was adopted.

The *Reference Committee on Insurance and Medical Service* reviewed the supplemental report of the Committee on Medical Service, the supplemental report of the Subcommittee on Insurance, the report of the Special Committee Appointed to Study Blue Cross-Blue Shield, and two resolutions from the Union County Medical Society, one dealing with minimum standards for accident and health insurance, and the other with veterans' care. Also the reference committee reviewed a resolution introduced from the Wapello County Medical Society concerning Blue Shield, and it reviewed the report of the Special Committee Appointed to Study Group Insurance.

The supplemental report of the Committee on Medical Service included a suggestion that the State Society initiate a campaign by Iowa physicians to inform the public of ways to detect "gold brick" policies and how to establish an adequate health care prepayment program. The reference committee accepted this section of the report, but withheld comment pending consideration of a resolution from the Union County Medical Society on this subject. The committee also approved the distribution of the *HANDBOOK OF RESOURCES AVAILABLE TO PHYSICIANS* which is to be sent to all members of the Society, and complimented the Committee on Medical Service for its publication.

The supplemental report of the Subcommittee on Insurance was considered and approved, with one correction. Throughout the report, Dr. Olsen referred to the specialties of radiology, pathology and anesthesiology. It was the recommendation of the reference committee that the word "physiatry" be added after

the word "anesthesiology" whenever these terms were used in his report. The report of the Subcommittee on Insurance gave the history of the problem of identifying what constitutes professional as contrasted with hospital services, and recounted the various events which led up to the appointment of a special committee of the Society to effect the transfer of medical services from Blue Cross certificates to Blue Shield certificates and also to eliminate the practice of medicine by hospitals. Dr. Olsen gave a chronological report of actions taken by the various groups on this problem. His report covered activity up to and including April 20, which was the date when the Iowa Hospital Association and Blue Cross considered the resolution which had been referred to the Blue Cross Board from the Blue Shield Board of Directors. The resolutions which were sent to the Blue Cross Board from the Blue Shield Board read as follows:

"1. That Blue Shield formally request Blue Cross to drop from the Blue Cross contract payment for medical services, thereby allowing Blue Shield, in the Blue Shield contract, to take over payment for all medical services.

"2. That as a temporary measure we approve an agreement between Hospital Service Inc. of Iowa, Associated Hospitals Service, Inc., and Iowa Medical Service, as follows: That professional services now provided by Blue Cross and Blue Shield contracts be paid for by the Blue Cross Plans if billed by a hospital and by Blue Shield if billed by a doctor. That income in Blue Cross-Blue Shield rate for these services be set aside for this purpose in a common fund. If adequate, surplus to be distributed to each Plan in ratio to its payments therefrom. If inadequate, deficiency to be absorbed by each Plan in ratio to its payment therefrom. Both type Plans obtain agreement on rate schedules for these services which will not materially change the cost to the subscriber or the patient and with no material reduction of benefits to the patient." The House of Delegates approved the supplemental report of the Subcommittee on Insurance as amended by the reference committee.

The reference committee reviewed the supplemental report of the Special Committee Appointed to Study Blue Cross-Blue Shield. This report contained a statement which the Blue Cross Board of Directors and the Board of Trustees of the Iowa Hospital Association submitted in lieu of the two resolutions which were sent to the Blue Cross Board from Blue Shield and which appear above. Their statement follows: "It was agreed that the question of specialist-hospital relationship was one that must be settled by the medical profession and the hospitals; that Blue Cross and Blue Shield shall adapt their programs to accommodate various arrangements made at local levels. We recognize that local arrangements may result in some present subscribers' being deprived of benefits under their present contracts and that both Blue Cross and Blue Shield should do all in their power to prevent this. Therefore, we accept the suggestion of Iowa Medical Service that, as a temporary measure, an agreement be entered into between Blue Cross and Blue Shield to provide the present benefits in their contracts so as not to result in any material loss of benefits or increase in subscription rates. We request the Iowa Hospital Association and Iowa State Medical Society to appoint a joint committee which can study the multiple problems of benefits to be included in Blue Cross-Blue Shield subscriber contracts." The reference committee, after studying the supplemental

report of this special committee and in particular the above statement, requested that an addition be made to this statement so that paragraph 4 would read, "We request the Iowa Hospital Association and the Iowa State Medical Society to appoint a joint committee which can study the multiple problems of benefits to be included in Blue Cross-Blue Shield subscriber contracts. In order that the negotiations do not draw out unduly, the specialty groups concerned shall submit written evidence that the individual members of the respective groups are making progress in making contracts at the local level by May 30, 1954." The reference committee made this request in order that a report can be made that will enable the Executive Council of the ISMS when it meets in June to give factual advice to the Board of Medical Examiners before medical licenses are renewed under the state law on July 1, 1954. The report, as amended, was approved by the House of Delegates.

The reference committee considered two resolutions from the Union County Medical Society. The first requested that the ISMS and its component groups endorse Blue Cross-Blue Shield Plans and all equally good insurance plans, and further that the Society propagandize all these plans through the device of a seal of approval to be advertised over television and radio programs, across physicians' desks and in their waiting rooms, and through local medical societies and the State Society, and further that the State Society prepare booklets in down-to-earth language entitled, "Why I Need Medical, Surgical and Hospitalization Insurance" and "How To Buy Medical, Surgical and Hospitalization Insurance." The resolution called for the appointment of a special committee or subcommittee of the State Society to review medical, surgical and hospitalization contracts to determine whether or not they meet certain standards and should be privileged to use the seal of approval. The reference committee approved the objectives of this resolution and suggested that the resolution be referred to the standing Committee on Insurance for further study. The reference committee further recommended that the Society explore the possibility of forming a contact committee composed of representatives of the ISMS, the Iowa Hospital Association, and Casualty Insurance Underwriters, and this committee should consider compiling a brochure outlining the features that should be included in medical, surgical and hospitalization policies, and further that this brochure should then be made available to the public. The House of Delegates approved this resolution with the above suggestion.

The reference committee considered a resolution on veterans' affairs introduced by the Union County Medical Society. This resolution called for the establishment of legislation removing the 10P10 section of the veteran's form (pauper's oath) from the classification of privileged communication, or that the Society approve a method of caring for indigent veterans under an insurance plan such as that suggested by the Tennessee State Medical Association. It stated further that, "We the members of the Iowa State Medical Society are not opposed to the AMA stand in principle, for we believe it to be correct. We are, however, opposed to the AMA stand on the basis of expediency and feel that we are unwise to spearhead this attack and in so doing breach the good will of the people. Further, we believe that other methods of attack should be sought, such as legislation to remove the 10P10 section of the VA from privileged com-

munication class or that an insurance method based on proven indigency be established on a specific income level as substantiated by income tax report, after the Tennessee Plan has received sound consideration." The reference committee recommended that the House of Delegates approve the Union County Medical Society resolution on veterans' affairs, which recommendation the House accepted.

The reference committee considered a resolution from the Wapello County Medical Society requesting Blue Shield to reduce its full service limit from \$3600 a year family income to \$2400, and further that a provision should be added to the Blue Shield contract making it possible for a fee to be added to the regular service charge and that the basis for this added fee should be established on the net worth of the individual, that if the insured's net worth is \$10,000 or more, then the physician should be privileged to charge an additional fee. This resolution was referred to the standing Committee on Insurance of the State Society for study and report to the House of Delegates in 1955.

The reference committee and the House of Delegates approved the supplemental report of the Special Committee to Study Group Insurance. The special committee introduced the following resolution, which was accepted. "Be it resolved that a health and accident insurance plan be adopted by the Iowa State Medical Society to encompass the following features:

1. Accident and sickness insurance with \$200 per month benefits for a five-year period.
2. Benefits starting the eighth day of disability.
3. \$5000 accidental death and dismemberment clause.
4. Enrollment to age 70.

and that the president of the Iowa State Medical Society appoint a special committee to review the proposals that have been submitted and to select and contract with a company to write this business for the members of the ISMS."

The House of Delegates accepted the report of the Reference Committee on Insurance and Medical Service, as amended.

Resolutions from the Pocahontas County Medical Society and the Dallas-Guthrie Medical Society and the supplemental report of the special Osteopathic Committee were considered by the *Reference Committee on Osteopathy*. Since the Pocahontas County Medical Society resolution and the supplemental report of the special Osteopathic Committee contained similar implications, it was the feeling of the reference committee that the two should be combined into one resolution, as follows: "Whereas the Iowa State Medical Society has for the past four years had an active Osteopathic Committee studying the osteopathic problem in Iowa, and during the past year has circulated a questionnaire to all members of the ISMS with a response of approximately 35 per cent, results of which have been summarized in the supplemental report of the Osteopathic Committee, and whereas the AMA Committee for the Study of Relations Between Osteopathy and Medicine will report to the AMA House of Delegates in June of 1954 in San Francisco, and whereas the Cline Report appears to be based upon discussions with osteopathic leaders and reference to osteopathic literature, as well as a questionnaire sent to members of the medical profession, and not on any direct attempt to evaluate the ability of the osteopathic schools to teach the healing arts, therefore be it resolved that the delegates to the AMA present the

results of the questionnaire as evidence of the sentiment of the members of the Iowa State Medical Society, and be it also resolved that the Iowa State Medical Society instruct its delegates to the AMA to favor the adoption of the Cline Committee's recommendations provided that there is an adequate inspection of the existing osteopathic schools." This resolution was approved by the House of Delegates.

The resolution from the Dallas-Guthrie County Medical Society requested that the ISMS go on record in support, when the situation arises, of carrying through the courts of the state of Iowa, and ultimately the state supreme court, if necessary, a law suit to have determined, set out and established who shall be qualified to practice medicine and surgery in Iowa within the framework of existing statutory laws regulating the licensure of all physicians and surgeons and setting out and defining the limits of practice, if any, to be placed upon those practicing the healing arts as defined and outlined in Chapter 147, Code of Iowa 1950, known as practice acts, general provisions, and practice of medicine and surgery, Chapter 148, Code of Iowa 1950, and practice of osteopathy and surgery, Chapter 150, Code of Iowa 1950. The reference committee recommended that the Dallas-Guthrie resolution be not adopted. The same resolution was introduced later under new business and the House approved referral of the resolution to the Committee on Osteopathy for further study. The House approved the report of the reference committee as a whole.

The *Reference Committee on Reports of Officers* congratulated the Board of Trustees for its fine work this year and for its supplemental report. The reference committee approved the recommendation of the Board of Trustees requesting permission to make the funds of the Baldrige-Beye Memorial available to the AMA Education Foundation with the stipulation that the funds be earmarked for use at the State University of Iowa College of Medicine and that they be identified as the Baldrige-Beye Memorial. The House of Delegates approved this report of the reference committee.

The Board of Trustees sitting as a special reference committee approved a resolution calling for the establishment of special dues over and above the regular dues in the sum of \$10 per year to continue for the next five years (1955-1959) inclusive) and that these special dues of \$10 per year shall be segregated by the Board of Trustees and used solely for the purposes of the ISMS Educational Fund. This action was approved by the House of Delegates.

The *Reference Committee on the Appointment of the Outstanding General Practitioner* of the year named Dr. John H. Chittum, Wapello, for this award. Dr. Chittum is 87 years of age, a graduate of Keokuk Medical College, March 16, 1897. He began the practice of medicine at Oakland, Illinois, in 1897 and from there moved to Wapello, Iowa, September 1, 1899. He has remained in that community ever since and is still actively engaged in the practice of medicine. Dr. Chittum is a member of the 50 year club of the ISMS. He was nominated for the outstanding general practitioner award by the members of the Louisa and Des Moines County Medical Societies and further recommended by a host of civic, business and religious leaders residing in Wapello and adjacent communities. Dr. Chittum is the fourth general practitioner to receive this award from the ISMS.

The 1954 meeting of the House of Delegates of the ISMS was adjourned by the Speaker at 9:40 A. M.

IOWA STATE MEDICAL SOCIETY

Officers and Committees, 1954-1955

President.....Gerald V. Caughlan, Council Bluffs
 President Elect.....Lonnie A. Coffin, Farmington
 Vice President.....Clyde A. Boice, Washington
 Secretary.....Richard F. Birge, Des Moines
 Treasurer.....N. Boyd Anderson, Des Moines
 Speaker of House of Delegates, Herman J. Smith, Des Moines
 Vice Speaker of House of Delegates,
 Thomas F. Thornton, Waterloo

	<i>Term Expires</i>
COUNCILORS	
First District—Arthur F. Fritchen, Decorah	1955
Second District—Carroll O. Adams, Mason City	1956
Third District—Thomas L. Ward, Arnolds Park (Re-elected)	1957
Fourth District—Paul W. Brecher, Storm Lake	1955
Fifth District—Ernest M. Kersten, Fort Dodge (Re-elected)	1957
Sixth District—Otis D. Wolfe, Marshalltown	1955
Seventh District—Eugene F. Van Epps, Iowa City ..	1956
Eighth District—John H. Sunderbruch, Davenport ..	1957
Ninth District—Elias B. Howell, Ottumwa	1956
Tenth District—Harold J. Peggs, Creston	1957
Eleventh District—Oscar Alden, Red Oak	1955

	<i>Term Expires</i>
TRUSTEES	
Wendell L. Downing, Le Mars, Chairman	1955
Fred Sternagel, West Des Moines	1957
George H. Scanlon, Iowa City	1957

	<i>Term Expires</i>
DELEGATES TO AMA	
Donovan F. Ward, Dubuque	January 1, 1956
George Braunlich, Davenport	January 1, 1955
Donald C. Conzett, Dubuque	January 1, 1955

Delegates who were elected at the 1954 annual meeting who will take office January 1, 1955:

Robert N. Larimer, Sioux City
 Francis C. Coleman, Des Moines

ALTERNATE DELEGATES TO AMA

	<i>Term Expires</i>
Francis C. Coleman, Des Moines	January 1, 1956
Frank G. Ober, Burlington	January 1, 1955
Otis D. Wolfe, Marshalltown	January 1, 1955

Alternates who were elected at the 1954 annual meeting who will take office January 1, 1955:

Frank G. Ober, Burlington (Re-elected)
 William M. Sproul, Des Moines
 Callistus H. Stark, Cedar Rapids

EXECUTIVE COUNCIL

Gerald V. Caughlan, Chairman	Council Bluffs
Lonnie A. Coffin	Farmington
Clyde A. Boice	Washington
Richard F. Birge	Des Moines
N. Boyd Anderson	Des Moines
Wendell L. Downing	Le Mars
Fred Sternagel	West Des Moines
George H. Scanlon	Iowa City
Arthur F. Fritchen	Decorah
Carroll O. Adams	Mason City
Thomas L. Ward	Arnolds Park
Paul W. Brecher	Storm Lake
Ernest M. Kersten	Fort Dodge
Otis D. Wolfe	Marshalltown
Eugene F. Van Epps	Iowa City
John H. Sunderbruch	Davenport
Elias B. Howell	Ottumwa
Harold J. Peggs	Creston
Oscar Alden	Red Oak
George Braunlich	Davenport
Donald C. Conzett	Dubuque
Donovan F. Ward	Dubuque

THE JOURNAL

Everett M. George Des Moines

Standing Committees of the House of Delegates

COMMITTEE ON SCIENTIFIC WORK

G. V. Caughlan, Chairman	Council Bluffs
L. A. Coffin	Farmington
R. F. Birge	Des Moines
N. B. Anderson	Des Moines

COMMITTEE ON LEGISLATION

F. C. Coleman, Chairman	Des Moines
J. D. Conner	Nevada
G. V. Caughlan	Council Bluffs
R. F. Birge	Des Moines

COMMITTEE ON NECROLOGY

This committee consists of the Councilors

MEDICO-LEGAL COMMITTEE

L. K. Meredith, Chairman	Des Moines
V. C. Robinson	Des Moines
J. C. Nolan	Corning

COMMITTEE ON ARTICLES OF INCORPORATION AND BY-LAWS

A. B. Phillips, Chairman	Des Moines
E. H. Sibley	Sioux City
P. F. Chesnut	Winterset

COMMITTEE ON MEDICAL SERVICE

C. V. Edwards, Chairman	Council Bluffs
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Subcommittee on Insurance

M. I. Olsen, Chairman	Des Moines
R. E. Smiley	Mason City
W. C. Eller	Waterloo
J. B. Gault	Creston
E. B. Hoeven	Ottumwa
C. A. Nicoll	Panora

Subcommittee on Veterans Affairs

R. C. Gutch, Chairman	Chariton
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 Doss, W. Norman, Leon
 Down, Howard I., Sioux City
 Downing, Arthur H., Des Moines
 Downing, James A., Des Moines
 Downing, John S., Cedar Rapids
 Downing, Leroy M., Cedar Rapids (L.M.)
 Downing, Wendell L., LeMars
 Downs, Vernon S., Ottumwa
 Dressler, John B., Ida Grove
 Drew, Edward J., Des Moines
 Drier, William C., Waterloo
 Driver, Richard W., Waterloo
 Drown, Roger E., Fort Dodge
 Dubansky, Marvin H., Iowa City
 Duewall, Rudolph H., West Des Moines
 Dulin, Evelyn H., Iowa City
 Dulin, John W., Iowa City
 Dulin, Tarana J. G., Iowa City (L.M.)
 Duling, Raymond J., Sioux City
 Dulmes, Abraham H., Klemme
 Dunlevy, James H., Fairfield
 Dunn, Dale E., Estherville
 Dunn, Francis C., Cedar Rapids
 Dunn, James, Clinton (L.M.)
 Dunn, Robert C., Des Moines
 Dunn, Robert E., Dysart
 Dunner, Ada, Des Moines
 Dunseth, Ward R., Kellogg
 Dushkin, Milton A., Chicago, Illinois
 Dutton, Dean A., Van Horne
 Dvorak, Joseph E., Sioux City
 Dwyer, Bernard B., Clinton
 Dwyer, Robert E., Clinton
 Dyson, James E., Des Moines
 Dyson, Ralph E., Des Moines
 Eastburn, Harvey B., Burlington
 Eastwood, Douglas W., Iowa City
 Eaton, Robert C., Clarion
 Ebinger, Edward W., Ottumwa
 Echternacht, Arthur P., Fort Dodge
 Eckberg, Richard A., Hubbard
 Eckstein, John W., Iowa City
 Edelman, David L., Des Moines
 Edington, Frank D., Spencer
 Edwards, Charles C., Rochester, Minn.
 Edwards, Charles V., Council Bluffs
 Edwards, Ralph R., Centerville
 Egan, Thomas J., Bancroft

- Egbert, Dan S., Fort Dodge
 Eggermayer, George W., Elliott
 Eggleston, Alfred A., Burlington
 Egloff, William C., Mason City
 ★Ehmke, Bruce C., Hot Springs, Ark.
 Ehrenhaft, Johann L., Iowa City
 Eicher, Charles R., Iowa City
 Eiel, John O., Osage
 Eiel, Merrill O., Osage
 Elkins, Higdon B., Iowa City
 Eller, Lancelot W., Kanawha
 Eller, William C., Waterloo
 Elliott, Olin A., Des Moines
 Ellis, Howard G., Des Moines
 Ellison, George M., Clinton
 Ellsworth, H. Charles, Cherokee
 Ellyson, Charles W., Waterloo
 Ellyson, Craig D., Waterloo
 Ely, Lawrence O., Des Moines
 Emanuel, Dennis G., Ottumwa
 Emerson, Edward L., Muscatine
 Emmons, Marcus B., Clinton
 Emmons, Margaret S., Clinton
 Emmons, Richard O., Clinton
 Eneboe, Edward M., Hawarden
 Engelmann, Andrew T., Sioux City
 Enggas, John T., Britt
 Englund, Philip M., Iowa City
 Enna, Melchior D., Dumont
 Ennis, Harry H., Manchester
 Ensley, Bruce, Shell Rock (L.M.)
 Entringer, Albert J., Dubuque
 Entz, F. Harold, Waterloo
 Ericsson, Martin G., Cedar Falls
 Erikson, Roland E., Davenport
 Estes, Maurice, Cedar Rapids
 Evans, Harold J., Homewood, Illinois
 Evans, John E., Winterset
 Evans, John G., New Hartford (L.M.)
 Evans, William I., Sac City
 Evers, Alvin E., Pella
 Faber, Luke, Dubuque
 Fail, Charles S., Adel
 Fallows, Howard D., Mason City (L.M.)
 Farago, Denes Steven, Lake City
 Farlow, Charles T., Farnhamville (L.M.)
 Farnsworth, Harold E., Storm Lake
 Farrage, Edward R., Council Bluffs
 Faust, John H., Manson
 Fee, Charles H., Denison
 Fee, Knight E., Toledo
 Feher, Karoly I., New York City
 Feightner, Robert L., Fort Madison
 Feldick, Harley G., Buffalo Center
 Fellows, Joseph G., Ames
 Felter, Allan G., Van Meter
 Fenton, Charles D., Bloomfield
 Fenton, Robert L., Centerville
 Ferguson, John W., Newton
 Ferguson, Paul, Lake City
 Ferlic, Rudolph J., Carroll
 Fesenmeyer, Charles R., Davenport
 Fickel, Jack D., Red Oak
 ★Field, Charles A., Manhattan, Kan.
 Field, George A., Des Moines (L.M.)
 Field, Grace E. W., Juneau, Alaska
 Fields, Robert B., LaPorte City (L.M.)
 Fieseler, Walter R., Fort Dodge
 Fieselmann, George F., Spencer
 Files, Edward H., Cedar Rapids
 Fillenwarth, Floyd H., Charles City
 Finch, George H., Des Moines
 Fisch, Roman J., Le Mars
 Fisher, June M., Iowa City
 Fisher, William A., Creston
 Fishman, Harlow J., Cherokee
 Fisk, Charlotte, Des Moines
 Fitch, Robert E., Des Moines
 Fitzgerald, Joseph D., Sloan
 Fitzpatrick, Dennis F., Iowa City (L.M.)
 Fitzpatrick, J. E., Jr., Holstein
 Flannery, Francis E., Cedar Rapids
 Flater, Norman C., Floyd
 Fleischman, Abraham G., Des Moines
 Fleming, Edward F., Rockwell
 Flickinger, Roger R., Mason City
 Flocks, Rubin H., Iowa City
 Floersch, Eugene B., Council Bluffs
 Floyd, Mark L., Iowa City
 Flynn, Charles H., Clarinda
 Flynn, Gordon A., Davenport
 Flynn, James R., Cedar Rapids
 Foley, Walter E., Jr., Davenport
 Foley, Walter E., Davenport
 Forbes, Stephen A., Iowa City
 Fordyce, Frank W., Des Moines
 Forsythe, Dorothy C., Newton
 Forsythe, Frank E., Newton
 Foss, John F., Burlington
 Foss, Robert H., Iowa City
 Foster, Morgan J., Cedar Rapids
 Foster, Warren H., Clinton
 Foster, Wayne J., Cedar Rapids
 Foulk, Frank E., Des Moines (L.M.)
 ★Fourt, Arthur S., Melbourne
 ★Fowler, Charles C., Lovilia
 Fowler, Willis M., Iowa City
 Fox, Charles I., Elma (L.M.)
 Fox, Ray A., Charles City
 Fox, Stephan, Ottumwa
 Franchere, Chetwynd M., Mason City
 Franey, William E., Cedar Rapids
 Frank, Louis J., Sioux City
 Frank, Owen L., Maquoketa
 Franklin, George W., Jefferson (L.M.)
 Fraser, James B., Des Moines
 Fraser, John H., Monticello
 Frech, Raymond F., Newton
 Frederickson, Adolph R., Lansing
 French, Royal F., Marshalltown
 French, Valiant D., Cedar Falls
 Frenkel, Hans S., Clarinda
 Friday, Walter C., Burlington
 Frink, Lyle F., Spencer
 Frink, Lynn E., Reinbeck
 Fritchen, Arthur F., Decorah
 Fritz, Lafe H., Dubuque (L.M.)
 ★From, Paul, Des Moines
 Frost, Loraine H., Iowa City
 Fry, Gerald A., Vinton
 ★Frys, Russell N., Iowa City
 Fuerste, Frederick, Jr., Dubuque
 Fullerton, Oscar L., Redding (L.M.)
 Funk, David C., Iowa City
 Furumoto, Kiyoshi, Keosauqua
 Gaard, Rasmus R., Radcliffe (L.M.)
 Galinsky, Leon J., Des Moines
 Gallagher, John P., Oelwein
 Gamet, Elmo E., Lamoni
 Gamet, Joseph H., Cedar Falls
 Gangeness, Leonard G., Des Moines
 Gann, Edward R., Sigourney
 Gantz, A. Jay, Greenfield
 Ganzhorn, Harold L., Mapleton
 Gardner, Harold O., Waterloo
 Gardner, John R., Lisbon (L.M.)
 Garland, John C., Marshalltown
 Garside, Arthur A., Davenport
 Garvy, Andrew C., Iowa City
 Gauger, John W., Early
 Gaukel, Leo A., Onawa
 Gault, James B., Creston
 Gearhart, George W., Springville (L.M.)
 Gee, Kenneth J., Shenandoah
 ★Geist, James H., Iowa City
 Gelfand, Arthur B., Sioux City
 Gelman, Webster B., Iowa City
 George, Everett M., Des Moines
 George, Louis A., Remsen
 Gerard, Russell S., II, Waterloo
 Gerken, James F., Waterloo
 Gernsey, Merritt N., Long Beach, Calif. (L.M.)
 Gerstman, Herbert, Marion
 Gessford, Howard H., George
 Getty, Everett B., Pringhar
 Gibbon, William H., Sioux City
 Gibbs, George M., Burlington
 Gibson, Chelsea D., Sac City
 Gibson, Douglas N., Des Moines
 Gibson, Paul E., Des Moines
 Gibson, Preston E., Davenport
 Giegerich, Walter F., Atlantic
 Gilbertson, David G., Mason City
 ★Giles, Francis E., Ft. Bragg, N. C.
 Giles, W. Clark, Council Bluffs
 Gilfillan, Clarence D. N., Bloomfield
 Gilfillan, Earl E., Bloomfield
 Gilfillan, Edwin O., Bloomfield
 Gilfillan, Homer J., Jr., Bloomfield
 Gillett, Francis A., Oskaloosa
 Gillett, R. Giles, Sigourney
 Gillies, Carl L., Iowa City
 Gillmor, Benjamin F., Red Oak (L.M.)
 Gingles, Earl E., Onawa
 Ginzberg, Fanny T., Cherokee
 Gittins, Thomas R., Sioux City
 Gittler, Ludwig, Fairfield
 Gius, John A., Iowa City
 Givens, H. Frank, West Bend (L.M.)
 Gladstone, William S., Iowa City
 Gleeson, John J., Vail
 Glenchur, Thomas C., Des Moines
 Glesne, Otto N., Fort Dodge
 Glick, Julius, Clinton
 Glomset, Daniel A., Des Moines
 Glomset, Daniel J., Santa Barbara, Calif. (L.M.)
 Goad, Robley R., Muscatine
 Goddard, Chester R., Iowa City
 Goddard, William B., Iowa City
 Goebel, Clarence J., Sioux City
 Goen, Edwin J., Charles City
 Goenne, Richard E., Davenport
 Goenne, William C., Davenport
 Goggin, John G., Ossian
 Goldberg, Louie, Des Moines
 Goldstein, Morton S., Iowa City
 Goodenow, Sidney B., Colo
 Goodman, Lawrence O., Marshalltown
 Gordon, Arnold M., Des Moines
 Gorrell, Ralph L., Clarion
 Gottsch, Edwin J., Shenandoah
 Gould, George R., Grundy Center (L.M.)
 Gower, Walter E., Fort Dodge
 Graham, James W., Sioux City
 Grams, LaVerne F., Buffalo Center
 Grandinetti, Arthur F., Oelwein
 Grant, John G., Ames
 Grau, Amandus H., Denison
 Graves, Charles C., Jr., Des Moines
 Graves, John P., Dubuque
 Gray, Charles W., Ottumwa
 Gray, Henry A., Keokuk (L.M.)
 Gray, Ralph E., Eldora
 Greco, Donald J., Los Angeles, Calif.
 Green, Don C., Graettinger
 Greenblatt, Jerald, Cedar Rapids
 Greenhill, Solomon, Des Moines
 Greenleaf, John S., Iowa City
 Gregg, John B., Sioux Falls, S. D.
 Greteman, Theodore J., Dubuque
 Griffin, Charles C., Dyersville
 ★Griffin, Clark C., Jr., Vinton (L.M.)
 Griffin, Frank L., Baldwin
 Griffin, John M., Des Moines (L.M.)
 Griffin, Robert E., Sheldon
 Griffith, Thomas L., Mason City
 Griffith, W. H., Clinton
 Griffith, William O., Council Bluffs
 Grimmer, George T., Charles City
 Groben, Elmer S., Columbus Junction
 Grossman, Milton D., Sioux City
 Grossman, Raymond S., Marshalltown
 Grossmann, Edward B., Orange City
 Grothaus, Dell L., Delta
 Grubb, Merrill W., Galva
 Gugle, Lloyd J., Ottumwa
 Gunn, Ross E., Boone
 Gurau, Henry H., Des Moines
 Gustafson, John E., Des Moines
 Gutch, Charles F., Clinton
 Gutch, Roy C., Chariton
 Gutch, Thomas E., Albia (L.M.)
 Gutenkauf, Charles H., Des Moines
 Hagen, Edward F., Decorah
 Haggard, David K., Hawarden
 Haines, Diedrich J., Des Moines
 Hale, Albert E., Mason City
 Hall, Bonnybel A., Maynard
 Hall, Clutey C., Maynard
 Hall, Forest F., Webster City
 Hallam, F. Tulley, Des Moines
 Hallberg, Harold C., Oelwein
 Halloran, William H., Audubon
 Halpin, Lawrence J., Cedar Rapids
 Hamilton, Benjamin C., Jr., Jefferson
 Hamilton, Cecil V., Garner
 Hamilton, Henry E., Iowa City
 Hamilton, William K., Iowa City
 Hansell, William W., Des Moines
 Hansen, Fred A., Red Oak
 Hansen, Hans, Logan
 Hansen, Niels M., Des Moines
 Hansen, Robert R., Marshalltown
 Hansen, Russell R., Storm Lake
 Hanson, Carl A., Waterloo
 Hanson, Henry M., Waverly
 Hanssman, Irving J., Council Bluffs
 Hardin, John F., Bedford
 Hardin, Robert C., Iowa City
 Hardwig, Oswald C., Waverly
 Hardwig, Robert P., Waverly
 Harken, Conrad R., Osceola
 Harkness, Gordon F., Davenport (L.M.)
 Harman, Dean W., Glenwood
 Harms, George E., Norway
 Harnagel, Edward J., Des Moines
 Harper, George E., Fort Madison
 Harper, Harry D., Fort Madison
 Harper, William H., Jr., Keokuk
 Harper, William H., Keokuk
 Harrington, Arlan F., Cedar Rapids
 Harrington, Raymond J., Sioux City
 Harris, Clinton E., Grinnell (L.M.)
 Harris, D. Dale, Marshalltown

- Harris, Grove W., Marshalltown
Harris, Herbert H., Sioux City
Harris, Jack T., Luverne
Harris, Ray R., Dubuque
Harrison, Dewitt C., Dubuque
Hart, Paul V., Des Moines
Hartley, Byron D., Mt. Pleasant
Hartman, Frank T., Waterloo (L.M.)
Hartman, Howard J., Waterloo
Hartung, Walter, Davenport
Harvey, Glen W., Cedar Rapids
Harwood, Arthur M., Sigourney
★Haskell, Jack G., Ft. Riley, Kansas
Hastings, Richard A., Ottumwa
Haufe, W. David, Bloomfield
Havlik, Al J., Tama
Hawkins, Charles P., Clarion
Hayes, William P., Cedar Rapids
Hayne, Willard W., Des Moines
Hazlet, Kenneth K., Dubuque
Heady, Conda C. C., Bloomfield (L.M.)
Heald, Clarence L., Sigourney (L.M.)
Heathman, Frank E., Pocahontas (L.M.)
Hecker, John T., Cedar Rapids
Heeren, Ralph H., Des Moines
Heffernan, Chauncey E., Sioux City
Heffron, John F., Anamosa
Hegg, Lester R., Rock Valley
Hegstrom, George J., Ames
Heilman, Elwood H., Ida Grove
Heilman, Robert D., Sioux City
Heimann, Verne R., Sioux City
Heise, Carl A., Jr., Jewell
Heise, Harris R., Marshalltown
Heise, Robert H., Story City
Heitzman, Paul O., Cedar Rapids
Helges, John B., Dubuque (L.M.)
Henderson, Lauren J., Cedar Falls
Henderson, Walker B., Oelwein
Hendricks, Atlee B., Davenport
Hendrickson, Alvin H., Sioux City
Henkin, John H., Sioux City
Hennes, Raphael J., Oxford
Hennessey, John M., Manilla
Hennessey, Felix A., Calmar
Hennessey, J. Donald, Council Bluffs
Henningsen, Artemus B., Clinton
Henry, Clyde A., Farson (L.M.)
Henry, Hiram B., Des Moines
Henstorf, Harold R., Shenandoah
Herman, John C., Boone
Herny, Peter M., Prairie City
Herrick, Thomas G., Gilmore City
Herrick, Walter E., Ottumwa
Herrmann, Christian H., Jr., Amana
Hersey, Nelson L., Independence
Hess, John, Jr., Des Moines
Heuermann, Dorothy J., Coulter
Heusinkveld, Henry J., Clinton
Hickenlooper, Carl B., Winterset
Hickey, Robert C., Iowa City
★Hickman, Donald M., Alexandria, La.
Hicks, Wayland K., Sioux City
Hildebrand, Howard H., Ames
Hill, Christine E., Virginia Beach, Virginia (L.M.)
Hill, Don E., Clinton
Hill, James W., Mount Ayr
Hill, Julia F., Des Moines (L.M.)
Hill, Lee F., Des Moines
Hill, Richard W., Lake Mills
Hines, Ralph E., Des Moines
Hirleman, Hal R., Cedar Rapids
Hirsch, Harry N., Sioux City
Hirst, Donald V., Council Bluffs
★Hobart, Francis W., Lake City
Hodges, Robert E., Iowa City
Hoeven, Edward B., Ottumwa
Hoffman, Paul M., Tipton
Hoffmann, Robert W., Des Moines
Hofmann, William P., Davenport
Hogenson, George B., Eagle Grove
Hollander, Werner M., Davenport
Hollis, Edward L., Marengo (L.M.)
Holtey, Joseph W., Ossian
Hombach, Walter P., Council Bluffs
Hommel, Placido R. V., Elkader
Honke, Edward M., Sioux City
Hooper, Lester E., Indianola
Hopkins, David H., Glidden
Hornaday, William R., Des Moines
Hornberger, John R., Manning
Horton, Robert R., Algona
Hosford, Horace F., Burlington
Hospodarsky, Leonard J., Des Moines
Hostetter, John I., Des Moines
Houghton, Earl J., Bettendorf
Houlahan, Jay E., Mason City
Houlihan, Francis W., Ackley
Houser, Blanche W., Cedar Rapids
Houser, Cass T., Cedar Rapids (L.M.)
Housholder, Harold A., Winthrop
Howar, Bruce F., Webster City
Howard, Dwayne E., Sioux City
Howard, Lloyd G., Council Bluffs
Howell, David A., Dubuque
Howell, Elias B., Ottumwa
Hoyt, John L., Creston
Hruska, Glen J., Belmond
Huber, Robert A., Charter Oak
Huber, Robert H., Osage
Hubiak, John, Odebolt
Hudek, Joseph W., Garnavillo
Huey, John R., Cedar Rapids
Huffman, William C., Iowa City
Hughes, Parker K., Des Moines
Hughes, Robert O., Ottumwa
Hull, Gene I., Des Moines
Hull, Henry C., Jr., Washington (L.M.)
Hulse, Roy A., Burlington
Hunt, Van W., Mason City
Hunting, Ralph D., Cedar Rapids
Huntley, Charles C., Avoca
Hurevitz, Hyman M., Davenport
Huston, Daniel F., Burlington
Huston, Marshall D., Cedar Falls
Huston, Paul E., Iowa City
Hyatt, Charles N., Corydon
Hyde, John R., Emmetsburg
Ihle, Charles W., Cleghorn (L.M.)
Ingham, Paul G., Mapleton
Ingle, Newell G., Cedar Rapids
Ingraham, David R., Sewal
Irish, Thomas J., Forest City
Irving, Noble W., Jr., West Des Moines
Isenberg, Bertice A., Lohrville
★Isham, Robert B., Oxnard, Calif.
Jack, Darwin B., Oelwein
Jackson, James M., Jefferson (L.M.)
Jackson, James S., Mt. Pleasant
Jackson, Robert L., Iowa City
Jacobs, Carl A., Sioux City
Jacobs, Edward L., Conrad
Jacoby, James A., Burlington
Jacques, Lewis H., Lone Tree
Jaenicke, Kurt, Clinton
Jaggard, Robert S., Oelwein
James, Audra D., Des Moines
James, David W., Des Moines
James, Lora D., Fairfield
James, Peter E., Audubon (L.M.)
Jameson, Robert E., Bettendorf
Janse, Phillip V., Algona (L.M.)
January, Lewis E., Iowa City
Jaquis, John R., Reinbeck
Jardine, George A., New Virginia
Jarvis, Harry D., Chariton
Jeffries, James H., Waterloo
Jeffries, Milo E., Marshalltown
Jeffries, Roy R., Waukon
Jenkins, George A., Albion (L.M.)
Jenkins, George D., Burlington
★Jenkins, Hanley F., Ogden
Jenkinson, Harry R., Iowa City
Jenks, Alonzo L., Jr., Des Moines
Jensen, Arthur E., Humboldt
Jensen, Kenneth V., Clarinda
Jensen, LeRoy E., Audubon
Jerdee, Ingebrecht C., Clermont
Jerome, Peter, Iowa City
Jessup, Parke M., Muscatine
Jirsa, Harold O., Cedar Rapids
Johann, Albert E., Des Moines
Johnson, Aaron Q., Sioux City
Johnson, Albert P., Sigourney (L.M.)
Johnson, Clarence A., Coon Rapids
Johnson, Francis N., Boone
Johnson, George M., Oberlin, Ohio (L.M.)
Johnson, G. Raymond, Ottumwa
Johnson, H. Clifford, Perryville, Ohio
Johnson, Harvey A., Atlantic
★Johnson, Merlin H., New York, N. Y.
Johnson, Merton A., Nevada
Johnson, Norman M., Clarinda
Johnson, Richard M., Denison
Johnson, Robert J., Iowa Falls
Johnson, Robert M., Des Moines
Johnson, Robert W., Atlanta, Ga.
Johnson, Victor P., Des Moines
Johnson, William A., Iowa Falls
Johnston, C. Harlan, Des Moines
Johnston, Florence D., Cedar Rapids
Johnston, George B., Estherville
Johnston, Harry L., Ames
Johnston, Helen, Des Moines
Johnston, Kenneth L., Oskaloosa
Johnston, Theodore L., Iowa City
Johnston, Wayne A., Dubuque
Johnstone, Alexander A., Keokuk
Joiner, Bennett A., Iowa City
Jones, Charles L., Gilmore City
Jones, Clare C., Spencer
Jones, Harold W., Sioux City
Jones, Harry J., Cedar Rapids (L.M.)
Jones, Louis H., Wall Lake (L.M.)
Jones, Maynard L., Colfax
Jongewaard, Albert J., Jefferson
Jongewaard, Jean, Jefferson
Jongewaard, Robert E., Scranton
Joranson, Robert E., Council Bluffs
Jordan, John W., Maquoketa
Jowett, John R., Clinton
Joyce, George T., Mason City
Joynt, Albert J., Waterloo
Joynt, Martin J., LeMars
Joynt, Michael F., Marcus
★Judiesch, Kenneth J., San Antonio, Texas
Juel, Einer M., Atlantic
Kaack, Harry F., Jr., Clinton
Kahler, Hugo V., Reinbeck
Kane, Thomas E., Boone
Kanealy, John F., Cedar Rapids
Kapke, Franklin W., Mason City
Kaplan, David D., Sioux City
Kaplan, Robert M., Davenport
Kas, Thomas D., Sutherland
Kasiske, Walter B., Keokuk
Kassmeyer, John C., Dubuque
Kast, Donald H., Des Moines
Katherman, Charles A., Sioux City
Katzmann, Frederick S., Des Moines
★Kaufman, Ernest L., Ft. Atkinson (L.M.)
Keech, Roy K., Cedar Rapids
Keen, Burlin E., Des Moines
Keeney, George H., Mallard
Keettel, William C., Jr., Iowa City
Kehoe, Joseph L., Davenport
Keil, Philip G., Des Moines
Keith, Charles W., Strawberry Point (L.M.)
Keith, John J., Marion
Kelberg, Melvin R., Sioux City
Kell, Joseph F., Jr., Sioux City
Kelley, Edmund J., Des Moines
Kelley, Lawrence E., Des Moines (L.M.)
Kelly, Dennis H., Des Moines
Kelly, Anthony H., Sioux City
Kelly, John F., Sioux City
Kelly, William J., Dubuque
Kelsey, James E., West Des Moines
Kemp, Robert R., Keokuk
Kenefick, John N., Algona
Kennedy, Elizabeth S., Oelwein (L.M.)
Kennedy, William C., Somers
Keohen, Gerald F., Dubuque
Kern, Lester C., Waverly (L.M.)
Kerr, H. Dabney, Iowa City
Kerr, Kriss M., Paton
Kerr, W. Hawley, Hamburg
Kershner, Frank O., Clinton
Kersten, Ernest M., Fort Dodge
Kersten, Herbert H., Fort Dodge
Kersten, John R., Fort Dodge
Kersten, Paul M., Fort Dodge
Kerwick, Joseph M., New Hampton
Kestel, John L., Waterloo
Ketner, Lester E., Oelwein
Kettelkamp, Enoch G., Monona
Keyser, Earl L., Marshalltown
Keyser, Ralph E., Marshalltown
Kieck, Ernest G., Cedar Rapids
Kienzle, William K., Wellsburg
Kiesau, Milton F., Postville
Kiesling, Harry F., Lehigh
Kilgore, Ben F., Des Moines
Kimball, John E., West Liberty
Kimberly, Lester W., Davenport
King, Dean H., Spencer
King, Oran W., Des Moines (L.M.)
King, Ross C., Clinton
Kingsbury, Charles L., Keokuk
Kingsbury, Kenneth R., Ottumwa
Kirch, Walter A., Des Moines
Kirkegaard, C. Smith, Estherville
Kirkendall, Walter M., Iowa City
Kirkham, Lindsay J., Mason City
Kitson, Walter W., Atlantic
Klein, John L., Jr., Muscatine
Klein, Robert F., Muscatine
Kleinberg, Henry E., Des Moines
Kline, Samuel, Sioux City
Klocksiehm, Harold L., Des Moines
Klocksiehm, Roy G., Rockwell City
Klok, George J., Council Bluffs

- Kluever, Herman C., Fort Dodge
 Knight, Benjamin L., Cedar Rapids
 Knight, Edson C., Marshalltown
 Knight, Russell A., Rockford
 Knipfer, Robert L., Jesup
 Knosp, Norman C., Belle Plaine
 Knott, Peirce D., Sioux City
 *Knout, Clare E., Portland, Oregon
 Knowles, Fred L., Fort Dodge
 Knudsen, Hubert K., Clinton
 Knutsen, Arne, Sioux City
 Koelling, Lloyd H., Newton
 Koontz, Lyle W., Vinton
 Kopecky, Edward F., Cedar Rapids
 Kopsa, Walter J., Tipton
 *Koptik, George, Jr., Garwin
 Korfmaier, Edwin S., Grinnell
 Kornder, Louis H., Davenport
 Korns, Horace M., Iowa City
 Kos, Clair M., Iowa City
 Koser, Donald C., Cherokee
 Krause, Robert E., Ottumwa
 Kremers, George A., Kokomo, Ind.
 Krepelka, George E., Osage
 Krettek, John E., Council Bluffs
 Kriebbaum, James B., Burlington
 Krigsten, Joe M., Sioux City
 Krigsten, William M., Sioux City
 Kroack, Kalman J., Buffalo Center
 Kruckenberg, William G., Cedar Rapids
 Krueger, Norman L., Stuart
 Kruml, Joseph G., Council Bluffs
 Kruse, Otto E., Tipton
 *Kruse, Rufus H., Pearl Harbor, Hawaii
 *Kuehn, Willard G., FPO, San Francisco, Calif.
 Kuhl, Augustus B., Davenport (L.M.)
 Kuhl, Augustus B., Jr., Davenport
 Kuhl, Robert H., Creston
 Kuhn, Mark A. R., Waterloo
 Kuhn, Nell, Iowa City
 Kuker, Leo H., Carroll
 Kulp, Raymond R., Davenport (L.M.)
 Kurtz, Cecelia M., Cedar Rapids
 Kyle, William S., Washington (L.M.)
 Lagen, Mansfield S., Dubuque
 Lagoni, Ralph P., Eldridge
 Lamb, Frederick H., Davenport
 Lamb, Harry H., Davenport
 Lambrecht, Paul B., Des Moines
 Lande, Jacob N., Sioux City
 Landis, Sylvanus N., Des Moines
 Langworthy, Henry G., Dubuque (L.M.)
 Lannon, James W., Mason City
 Larimer, Robert N., Sioux City
 Larsen, Elmer A., Centerville
 Larsen, Frank S., Fort Dodge
 Larsen, Harold T., Fort Dodge
 Larsen, Lawrence V., Harlan
 Larson, Carroll B., Iowa City
 *Larson, Erling, Jr., Indianapolis, Ind.
 Larson, Gerald E., Elk Horn
 Larson, Lester E., Decorah
 Larson, Marvin O., Hawarden
 LaRue, Jack L., Anita
 Latchem, Charles W., Des Moines
 Laube, Paul J., Dubuque
 Laughlin, Ralph M., Cedar Rapids
 Lavender, John G., George
 *Lawler, Matthew P., Jr., Corona, Calif.
 Lawlor, Jeremiah F., Cherokee
 Lawrence, Joseph W., Dubuque
 Layton, Jack M., Iowa City
 Lederman, Joseph, Oskaloosa
 *Lee, Robert W., Burlington
 Lee, Wayne R., Burlington
 Leehey, Paul J., Independence
 Leffert, Frank B., Centerville
 Lehman, Emery W., Des Moines (L.M.)
 Lahr, Sylvan M., Cedar Rapids
 Leighton, Lewis L., Fort Dodge
 Leinbach, Samuel P., Belmond
 Leinfelder, Pladius J., Iowa City
 Leiter, Herbert C., Sioux City
 Lekwa, Alfred H., Story City
 Lemon, Kenneth M., Oskaloosa
 Lenaghan, Robert T., Clinton
 Lenzmeier, Albert J., Davenport
 Leonard, Thurman K., Madrid
 LePoidevin, Jean S., Waterloo
 Levy, James W., Sioux City
 Lewis, Bernard I., Iowa City
 Lewis, Faye C., Webster City
 Lewis, William B., Webster City
 Lichter, Theodore W., Edgewood
 Lierle, Dean M., Iowa City
 Lierman, Clifford E., Lake View
 Liken, John A., Creston
 Limbert, Edwin M., Council Bluffs
 Limburg, J. Irwin, Jefferson
 Limburg, John I., Jr., Jefferson
 Lincoln, Simon E., Des Moines (L.M.)
 Linder, Enfred E., Ogden
 Lindholm, Claire V., Armstrong
 Lindley, Ellsworth L., Cedar Rapids
 Linge, C. Scott, Fayette
 Liska, Edward J., Ute
 Lister, Eugene E., Dallas Center
 Lister, Kenneth E., Ottumwa
 Little, Luther W., Atkins
 Lloyd, John M., Washington
 Locher, Robert C., Cedar Rapids
 Lockhart, Harold A., Cedar Rapids
 Lodwick, Gwilym S., Jr., Iowa City
 Loeck, John F., Independence
 Loes, Anthony M., Dubuque
 Lohman, Frederick H., Waterloo
 Lohmann, Carl J., Burlington
 Lohr, Phillips E., Churdan
 Long, Draper L., Mason City
 Long, Llewelyn L., Atlantic
 Longworth, Wallace H., Boone
 Loomis, Frederic G., Waterloo
 Lorfeld, Gerhard W., Davenport
 Losasso, David A., Davenport
 Loseke, Margaret J., Strawberry Point
 Losh, Clifford W., Des Moines
 Losh, Clifford W., Jr., Des Moines
 Love, Francis L., Iowa City (L.M.)
 Lovejoy, E. Parish, Des Moines
 Loving, Luther W., Estherville
 Lowry, Charles F., Council Bluffs
 Loxterkamp, Edward O., Rolfe
 Lueck, Arthur G., Des Moines
 Luehrsmann, Bernard C., Dyersville
 Luke, Edward, Coin (L.M.)
 Lulu, Donald J., Des Moines
 Lundvick, Arthur W., Iowa City (L.M.)
 Luse, Ralph F., Clinton
 Lutton, John D., Sioux City
 Lyman, Frank L., Jr., Fort Madison
 Lyons, John C., Davenport
 Lyons, Mary L., Des Moines
 MacGregor, John K., Mason City
 MacLeod, Hugh G., Greene
 MacQueen, John C., Iowa City
 McAllister, William G., Ida Grove
 McBride, James T., Des Moines (L.M.)
 McBride, Robert H., Sioux City
 McCaffrey, Eugene H., Des Moines
 McCall, John H., Allerton
 McCarthy, Frank D., Sioux City
 McClean, Earl D., Des Moines
 McClellan, John W., Onawa
 McClintock, John T., Iowa City (L.M.)
 McClintock, Robert S., Iowa City
 McClure, Gail A., Ames
 McClurg, Frank H., Fairfield
 McConkie, Edwin B., Cedar Rapids
 McConkie, Willis L., Carroll
 McConnell, Robert W., Davenport
 McCool, Robert F., Clarion
 McCoy, Harold J., Des Moines
 McCoy, John T., Cedar Falls
 McCrary, W. Ashton, Lake City
 McCree, Murry L., Washington
 McCreight, George C., Des Moines
 McCuiston, Harry M., Sioux City
 McDonald, Don J., Cedar Rapids
 McDowall, Gilbert T., Gladbrook (L.M.)
 McDowell, William O., Grundy Center (L.M.)
 McEleney, Donald A., Iowa City
 McFadden, F. Ross, Davenport
 McFarland, Guy E., Ames
 McFarland, Guy E., Jr., Ames
 McFarland, Julian E., Ames
 McGahey, William B., Webster City
 McGarvey, Cornelius J., Des Moines
 McGeehon, Robert C., Indianola
 McGilvra, Arthur L., Sioux Center
 McGinnis, George C., Fort Madison
 McGrane, Merle J., New Hampton
 McGuire, Kenneth L., Keota
 McGuire, Roy A., Fairfield
 McHugh, Charles P., Sioux City
 McIllece, Raymond C., Fort Madison
 McIntosh, Philip D., Ottumwa
 McIntyre, Caryl C., Waterloo
 McKay, Richard V., Jr., Dubuque
 McKean, Frank F., Allison
 McKitterick, John C., Burlington
 McLaughlin, Charles W., Washington (L.M.)
 McMahon, Arthur E., Jr., Mason City
 McMahon, Thomas, Garner (L.M.)
 McMeans, Thomas W., Davenport
 McMillan, George J., Fort Madison
 McMillan, James T., III, Des Moines
 McMurray, Edward A., Newton
 McMurray, Harry N., Burlington
 McNamara, Robert J., Dubuque
 McNamee, Jesse H., Des Moines
 McQuiston, J. Stuart, Cedar Rapids
 McTaggart, William B., Fort Dodge
 McVay, Melvin J., Lake City
 Mackin, M. Charles, Des Moines (L.M.)
 Macrae, James G., Creston (L.M.)
 Macy, William Wray, Iowa City
 Magaret, Ernest C., Glenwood
 Magee, Emery E., Waterloo
 Mahoney, James D., Council Bluffs
 Mailliard, Robert E., Storm Lake
 Maixner, William D., Ottumwa
 Maland, Donald O., Cresco
 Malench, Henry L., Eldridge
 Maloy, Wayland H., Shenandoah
 Manderscheid, Robert A., Boone
 Mangan, J. Thomas, Forest City
 Manning, Ephraim L., Davenport
 Manthey, Charles E., Waterloo
 Mantz, Russell L., Cedar Rapids (L.M.)
 Maplethorpe, Charles W., Toledo
 Maplethorpe, Charles W., Jr., Toledo
 Marble, Edwin J., Marshalltown
 Marble, Pearl L., Liscomb (L.M.)
 Marble, Willard P., Marshalltown
 Margulies, Harold, Des Moines
 Marinos, Harry G., Mason City
 Maris, Cornelius, Sanborn
 Maris, Gerrit, Sioux City
 Maris, William, Sioux Center
 Mark, Edward M., Clarksville
 Mark, Milton S., Des Moines
 Marker, John I., Davenport
 Marme, George W., DeWitt
 Marquis, Fred M., Waterloo
 Marquis, George S., Des Moines
 Marsh, Frederick E., Council Bluffs
 Marsh, Frederick E., Jr., Council Bluffs
 Marshall, Jean A., Solon
 Martin, James W., Holstein
 Martin, Josef R., Carroll
 Martin, Lee R., Council Bluffs
 Martin, Ronald F., Sioux City
 Martin, Sidney D., Carroll (L.M.)
 Mason, Edward E., Iowa City
 Mason, Robert P., Des Moines
 Mason, Stella M., Mason City (L.M.)
 Mast, Truman M., Washington
 Mater, Dwight A., Knoxville
 *Mater, Roy V., Knoxville
 Matheson, John H., Des Moines
 Mathiasen, Aileen E., Council Bluffs
 Mathiasen, Emmett B., Council Bluffs
 Mathiasen, Henning W., Council Bluffs
 Mathiasen, John W., Council Bluffs
 Maticka, Jack B., Iowa City
 Matthey, Carl H., Davenport
 Matthey, Walter A., Davenport
 Mattice, Lloyd H., Sheldon
 Mattice, Roger J., Sioux Rapids
 Mauritz, Emory L., Des Moines
 Maxwell, Charles T., Sioux City
 Maxwell, John, What Cheer
 May, Charles D., Iowa City
 May, George A., Des Moines
 *Mead, Frank N., Cedar Falls (L.M.)
 Meany, John F., Rockwell
 Meffert, Clyde B., Cedar Rapids
 Megorden, William H., Mount Pleasant
 Mellen, Robert G., Clinton
 Mendenhall, Jean C., Independence
 Meredith, Loren K., Des Moines
 Merrill, Herbert C., Des Moines
 Merkel, Arthur E., Des Moines
 Merkel, Byron M., Des Moines
 Merritt, Arthur M., Des Moines (L.M.)
 Merritt, F. Benjamin, Dubuque
 Merritt, James O., West Des Moines
 Merselis, Harold K., Audubon
 Mershon, Clinton E., Adel (L.M.)
 Meyer, Paul G., Manchester
 Meyers, Frank W., Dubuque (L.M.)
 Meyers, Paul T., Bloomfield
 Meyers, Robert P., Ottumwa
 Michaelson, Don, Boone
 Michener, Robert B., Iowa City
 Mikelson, Clarence J., Waterloo
 Miller, Chester I., Iowa City
 Miller, Donald F., Williamsburg
 Miller, Enos D., Wellman
 Miller, Garfield, Calmar
 Miller, Howard L., Cedar Rapids
 Miller, Jay R., Wellman
 Miller, Lawrence A., North English

- Miller, Lawrence A., II, North English
 Miller, Richard L., Waterloo
 Miller, Robert C., Waterloo
 Miller, Temple M., Muscatine
 Miller, Wilbur R., Iowa City
 Millice, Glenn S., Battle Creek
 Mills, Frank W., Ottumwa (L.M.)
 Miltner, Leo J., Davenport
 Minassian, Harootune A., Des Moines (L.M.)
 Minassian, Thaddeus A., Des Moines
 Miner, James B., Charles City
 Minkel, Roger M., Fort Dodge
 Mirick, Donald F., Clinton
 Mitchell, Claire H., Cincinnati
 Mitchell, Duane E., Mount Ayr
 Mitchell, Richard C., Waterloo
 Moberly, John W., Dubuque
 Mochal, Milo A., Decorah
 Moe, Ralph H., Griswold
 Moen, Stanley T., Cedar Rapids
 Moerke, Robert F., Burlington
 Moermond, James O., Hull
 Moershel, Henry G., Homestead
 Moershel, William J., Cedar Rapids
 Moessner, Samuel F., Iowa City
 Monnig, Philip J., Des Moines
 ★Montgomery, Albert E., Phoenixville, Pa.
 Montgomery, George E., Ames
 Montgomery, Guy E., Washington
 Montz, Fred, Lowden
 Moon, Barclay J., Cedar Rapids
 Mooney, James C., Des Moines
 Moore, Carlyle C., Emmetsburg
 Moore, Edson E., Fort Dodge
 Moore, Harris C., Clearfield
 Moore, Jesse C., Eldon (L.M.)
 Moore, Pauline V., Iowa City
 Moore, Richard M., Des Moines
 Moorehead, Harold B., Underwood
 Mordaunt, Richard H., Nevada
 Morgan, Francis W., Ottumwa
 Morgan, Harold W., Mason City
 Morgan, Jack N., Fairfield
 Morgan, Paul W., Mason City
 Morgan, Rex L., Sioux City
 Morgenthaler, Otis P., Templeton (L.M.)
 Moriarity, Darwin L., Council Bluffs
 Moriarty, Lauren R., Kansas City, Kans.
 Morris, Lucien E., Iowa City
 Morrison, John R., Glidden
 Morrison, John W., Alta
 Morrison, Robert E., Waterloo
 Morrison, Roland B., Carroll
 Morrison, Wesley J., Cedar Rapids (L.M.)
 Morrissey, George E., Davenport
 Morrissey, William J., Des Moines
 Morse, Charles H., Eagle Grove (L.M.)
 ★Morton, Matthew T., Estherville
 Mosher, Martin L., Jr., Iowa City
 Mott, William H., Farmington (L.M.)
 Motto, Edwin A., Davenport
 Mountain, George E., Des Moines
 Moyers, Jack, Iowa City
 Mugan, Robert C., Sioux City
 Mullmann, Arnold J., Perry
 Mulry, William C., Carroll
 Mulson, Frederick W., Cedar Rapids
 Munger, Elbert E., Jr., Spencer
 Munns, Richard E., Hampton
 Murchison, Kenneth, Sidney (L.M.)
 Murphey, Arlo L., Fredericksburg
 Murphy, Cornelius B., Alton
 Murphy, George C., Waterloo
 Murphy, James H., Des Moines
 Murray, Frederick G., Cedar Rapids (L.M.)
 Murray, Johnathan H., Burlington
 Murtaugh, James E., New Hampton
 Myerly, William H., Des Moines
 Myers, Edward M., Boone (L.M.)
 Myers, Kermit W., Sheldon
 Myers, Robert W., Monticello
 Nagle, David R., Iowa City
 Nakashima, Victor K., Dubuque
 Nash, Edwin A., Ottumwa
 Neal, Emma J., Cedar Rapids (L.M.)
 Nederhiser, Morgan I., Cascade
 Needles, Roscoe M., Atlantic
 Neglia, Fortunato J., Maxwell
 Neligh, Gordon L., Jr., Council Bluffs
 Nelken, Leonard, Clinton
 Nelson, Arnold L., Des Moines
 Nelson, Frederick L., Ottumwa (L.M.)
 Nelson, F. Lawrence, Jr., Ottumwa
 Nelson, Leo C., Jefferson
 Nelson, Norman B., Iowa City
 Nelson, Paul O., Emmetsburg
 Nelson, Robert J., Clinton
 Nemec, Joseph J., Cedar Rapids
 Nemmers, Gerald J., Washington
 Netolicky, Robert Y., Cedar Rapids
 Neufeld, Robert J., Davenport
 Neuzil, William J., Cedar Rapids
 Newland, Don H., Belle Plaine
 Newland, Don O., Des Moines
 Newman, Robert W., Iowa City
 Niblock, George F., Denver, Colorado (L.M.)
 Nicholson, Clyde G., Des Moines
 Nicoll, Charles A., Panora
 Nicoll, David T., Mitchellville (L.M.)
 Nielsen, Arnold T., Ankeny
 ★Nielsen, Glen E., Topeka, Kan.
 Nielsen, Rudolph F., Cedar Falls
 Nielson, Arthur L., Council Bluffs
 Niemann, Theodore V., Brooklyn
 Nierling, Paul A., Cresco
 Noble, Nelle S., Des Moines (L.M.)
 Noble, Rusl P., Alta
 Noe, Carl A., Cedar Rapids
 Noe, Charles F., Amara (L.M.)
 Nolan, John C., Corning
 Nomland, Ruben, Iowa City
 Noonan, James J., Marshalltown
 Nord, Donald H., Cambridge
 Nordin, Charles A., Des Moines
 Norris, Lewis D., Newton
 North, Frank R., Winfield
 Noun, Louis J., Des Moines
 Noun, Maurice H., Des Moines
 Nyquist, David M., Eldora
 Ober, Frank G., Burlington
 O'Brien, Lyl J., Fort Dodge
 O'Brien, Stephen A., Jr., Iowa City
 O'Brien, Stephen A., Mason City
 O'Connor, Edwin C., New Hampton
 Odell, James E., Iowa City
 O'Donnell, Joseph E., Clinton
 O'Donoghue, Archibald F., Sioux City
 O'Donoghue, James H., Storm Lake (L.M.)
 Oelrich, Carl D., Sioux Center
 Oggel, Herman D., Maurice (L.M.)
 O'Keefe, Paul T., Waterloo
 Olch, David I., Iowa City
 O'Leary, Francis B., Sibley
 Olin, Elvin E., Dubuque
 Olsen, Martin I., Des Moines (L.M.)
 Olsen, Max E., Minden
 Olsen, Randal E., Milton
 Olson, Evelyn M., Winterset
 Olson, Nels, Lake Mills
 Olson, Russell L., Northwood
 Olson, Stewart O., Des Moines
 O'Neal, Harold E., Tipton
 Orcutt, Paul E., Marion
 Orelup, Don N., Albion
 Orton, Lawrence C., Mason City
 Osborn, C. Robert, Dexter
 Osincup, Paul W., Sioux City
 Osten, Burdette H., Northwood
 O'Toole, Laurence C., Le Mars
 O'Toole, Roger L., Waterloo
 Ottilie, Donald J., Oelwein
 Otto, Paul C., Fort Dodge
 Owca, Anthony S., Centerville
 Owen, William E., St. Ansgar
 Pace, Arthur A., Toledo (L.M.)
 Page, Wesley M., Montezuma
 Pagelsen, Otto H., Pharr, Texas (L.M.)
 Pahlas, Henry M., Dubuque
 Paige, Ralph T., La Porte City
 Painter, J. Carl, Dubuque
 Palcheff, Christ L., Fairfield
 Palmer, Carson W., Guttenberg
 Palmer, Howard C., West Liberty
 Palumbo, Louis T., Des Moines
 Paragas, Modesto R., Creston
 Parish, John R., Grinnell
 Parke, John, Cedar Rapids
 Parker, Loran F., Iowa Falls
 Parker, Robert L., Des Moines
 Parks, Claude O., Iowa City
 Parry, Roy E., Scranton
 Parson, Victor G., Des Moines
 Parsons, John C., Des Moines
 Paschal, George A., Webster City
 Pascoe, Paul L., Carroll
 Patterson, John N., Burlington (L.M.)
 Patterson, Roy A., Webster City
 Paul, James R., Sioux City
 Paul, John D., Anamosa
 Paul, Richard E., Des Moines
 Paul, William D., Iowa City
 Paulsen, Donald A., Victor
 Paulsen, Herbert B., Harris
 Paulson, Jerome F., Mason City
 Paulus, Edward W., Iowa City
 Paulus, James W., Dubuque
 Pearlman, Leo R., Des Moines
 Pearson, George J., Burlington
 Peart, John C., Davenport
 Peasley, Harold R., Des Moines
 Peck, Raymond E., Davenport
 Pedersen, Arthur M., Council Bluffs
 Pedersen, Paul D., Council Bluffs
 Peggs, Harold J., Creston
 Peisen, Conan J., Des Moines
 Pelz, Werner P., Charles City
 Penly, Don H., Cedar Falls
 Perel, Ada R., Iowa City
 Perkins, Franklin C., Hedrick
 Perkins, Rollin M., Davenport
 Perley, Arthur E., Waterloo
 Perman, Harvey H., Forest City
 Pester, George H., Council Bluffs
 Petersen, Donal C., Burlington
 Petersen, Emil C., Atlantic
 Petersen, Millard T., Atlantic
 Petersen, Robert E., Dubuque
 Petersen, Vernon W., Clinton
 Peterson, Elroy R., Ames
 Peterson, Evan A., Burlington
 Peterson, Frank R., Cedar Rapids
 Peterson, John C., Hartley
 Peterson, Ray W., Clear Lake
 Pfeiffer, Harry E., Cedar Rapids
 Pfohl, Anthony C., Dubuque
 Phelan, M. Patricia, Altoona
 Phelps, Charles R., Ottumwa
 Phelps, Gardner D., Waterloo
 Phelps, Richard E. H., New Sharon
 Phetepiece, Willard S., Davenport
 Phifer, Robert L., Davenport
 Phillips, Albin B., Clear Lake (L.M.)
 Phillips, Allan B., Des Moines
 Phillips, Clarence P., Muscatine
 Phillips, Walter B., Montezuma
 Piburn, Marvin F., S. Rhodesia, Africa
 Piekenbrock, Frank J., Dubuque
 Piercy, Kenneth C., Ames
 Pierson, Lawrence E., Sioux City
 Pitcher, Arlo L., Belmond
 Pitluck, Harry L., Laurens
 Pittinger, Charles B., Iowa City
 Plager, Vernon H., Waterloo
 Plankers, Arthur G., Dubuque
 Plass, Everett D., Saranac Lake, New York (L.M.)
 Plows, Charles W., Ottumwa
 Poepsel, Frank L., West Point
 Ponseti, Ignacio V., Iowa City
 Poore, Samuel D., Villisca
 Porter, Charles E., Redfield
 Porter, Richard C., Des Moines
 Porter, Robert J., Des Moines
 Porter, S. Dale, Grinnell
 Posner, Edward R., Des Moines (L.M.)
 Posner, Edward R., Jr., Des Moines
 Powell, Adrian R., Elkader
 Powell, Lester D., Des Moines
 Powell, Robert A., Shenandoah
 Powell, Robert M., Iowa City
 Powers, George H., Shenandoah
 Powers, Henry R., Emmetsburg
 Powers, Ivan R., Waterloo
 Powers, John L., Estherville
 Preece, Wade O., Waterloo
 Prescott, Kenneth H., Storm Lake
 Presnell, William H., Charlotte
 Prewitt, Leland H., Ottumwa
 Price, Alfred S., Des Moines (L.M.)
 Priestley, Joseph B., Des Moines
 Proctor, Rothwell D., Cedar Rapids
 Prouty, James V., Cedar Rapids
 Province, William, Jr., Dubuque
 Ptacek, Joseph L., Webster City
 Pugh, Philip F. H., Sioux City
 Pumphrey, Loira C., Keokuk
 Puntney, Andrew W., Boone
 Purdy, William O., Des Moines
 Quinn, Francis P., Dubuque
 Raasch, Richard F., Cedar Rapids
 Radcliffe, Christian E., Iowa City
 Rahn, Gordon E., Mt. Vernon
 Ralston, Furman P., Knoxville
 Rambo, David T., Ottumwa (L.M.)
 Ramsdell, Stuart T., Clarinda
 Randall, John H., Iowa City
 Randall, Ross G., Waterloo
 Randall, William L., Hampton
 Rankin, Isom A., Iowa City

- Rankin, John R., Keokuk
 Rankin, William, Keokuk (L.M.)
 Ransom, Harry E., Des Moines
 Rater, David L., Ottumwa
 Rathe, Herbert W., Waverly
 Rausch, Gerald R., Sioux City
 Ravreby, Mark D., Des Moines
 Raw, Elmer J., Pierson (L.M.)
 Reading, Donald S., Des Moines
 Readinger, Harry M., New London
 Redfield, Earl L., Des Moines
 Redmond, James J., Cedar Rapids
 Redmond, Thomas M., Monticello (L.M.)
 Reed, Andrew I., Estherville
 Reed, Paul A., Iowa City (L.M.)
 Reed, Robert J., Des Moines
 Reeder, James E., Sioux City
 Reeder, James E., Jr., Sioux City
 Reedholm, Edwin A., Grundy Center
 Reimers, Robert S., Fort Madison
 Rembolt, Raymond R., Iowa City
 Render, Norman D., Clarinda
 Reuber, Roy N., Mason City
 Reuling, Frank H., Waterloo
 Reynolds, Albert C., Des Moines (L.M.)
 Rhodes, John M., Pocahontas
 Richardson, Francis H., Iowa City
 Richardson, Leon F., Collins (L.M.)
 Richey, Granville L., Centerville
 Richmond, Arthur C., Fort Madison
 Richmond, Frank R., Fort Madison
 Richmond, Frank R., Jr., Fort Madison
 Richmond, Paul C., New Hampton
 Richter, Harold J., Albion
 Ridenour, Edward J., Dunkerton
 Ridenour, Joseph E., Waterloo (L.M.)
 Rider, Harmon E., Sioux City
 Riegelman, Ralph H., Des Moines
 Rieniets, John H., Cedar Rapids
 Riggert, Leonard O., Clinton
 Rimel, George W., Bedford
 Rindskopf, Wallace, Des Moines
 Ringena Engelke J., Brooklyn
 Rinker, George E., Oto (L.M.)
 Rizzo, Frank M., Sibley
 Robb, James B., Chariton (L.M.)
 Robb, William J., Cedar Rapids
 Roberts, C. Ronald, Dysart
 Roberts, F. LeRoy, Corona, Calif. (L.M.)
 Roberts, Francis M., Knoxville (L.M.)
 Roberts, Justus B., Ottumwa
 Robertson, Treadwell A., West Liberty
 Robinson, George L., Hudson
 Robinson, Robert E., Waverly (L.M.)
 Robinson, Van C., Des Moines
 Rock, John E., Davenport
 Rock, J. Gordon, Davenport
 Rockwell, Maryelda, Clinton
 Rodawig, Don F., Spirit Lake
 Roddy, Harold J., Mason City
 Rodemeyer, Frederick H., Sheffield
 Rodgers, George H., Mount Ayr
 Rogers, Claude B., Earlville (L.M.)
 Rohlf, Edward L., Jr., Waterloo
 Rohrbacher, William M., Iowa City
 Rohwer, Roland T., Sioux City
 Rolfs, Floyd O., Parkersburg
 Rolfs, Fred A., Aplington
 Romine, John H., Webster City (L.M.)
 Rominger, Clark R., Waukon
 Rominger, Clark W., Waukon
 *Roost, Frederick H., Sioux City (L.M.)
 Rose, Alvin A., Story City
 Rose, Joseph E., Grundy Center
 Rosebrook, Lee E., Ames
 Rosendorff, Charlotte, Bettendorf
 Ross, Arthur J., Jr., Perry
 Rost, Glenn S., Lake City
 Rotkow, Maurice J., Des Moines
 Rowat, Harry L., Des Moines (L.M.)
 Rowley, Dean A., Iowa City
 Rowley, Robert D., Burlington
 Rowley, William G., Sioux City
 Rowney, George W., Sioux City
 Royal, Lester A., West Liberty
 Royal, Malcolm A., Des Moines
 Rudersdorf, Howard E., Sioux City
 Rugtvi, George M., Des Moines
 Ruliffson, Howard D., Storm Lake
 Ruml, Wentzle, Cedar Rapids (L.M.)
 Rusk, Ross P., Dubuque
 *Russ, Jesse E., Rake
 Russell, Elwood P., Burlington
 Russell, John, Yuma, Arizona (L.M.)
 Russell, Ralph E., Waterloo
 Rust, Emery A., Webb
 Rustin, Arnold, Iowa City
 Ruth, Verl A., Des Moines
 Ryan, Allen J., Harlan
 Ryan, Charles M., Sioux City
 Ryan, Cyril J., Creston
 Ryan, Martin J., Sioux City
 Ryan, Robert A., Fairfield
 Saar, Jesse L., Donnellson
 Saar, Jesse L., Jr., Burlington
 Saar, John W., Keokuk
 Sacco, Severino O., Iowa City
 Safley, Agnes I., Cedar Rapids (L.M.)
 Safley, Max W., Forest City
 Sals, Adolph L., Iowa City
 St. Onge, Joseph A., Sioux City
 Sainz, Anthony, Cherokee
 Samberg, Harry H., Des Moines
 Sampson, Carl E., Creston
 Sampson, Frank E., Creston (L.M.)
 Sams, Joseph H., Clarion (L.M.)
 Sanders, George E., Miami, Fla. (L.M.)
 Sanders, Matthew G., Fort Dodge
 Sanders, Wilford M., Jr., Iowa City
 Sanders, William E., Tucson, Ariz. (L.M.)
 Sands, Sidney L., Des Moines
 Sarff, Floyd G., Logan
 Sartor, Guido J., Mason City
 Sartor, Pierre, Tionka (L.M.)
 Satrang, Geraldine, Sioux City
 Sattler, Dwight G., Kalona
 Sauer, Harold E., Marshalltown
 *Saunders, Robert J., Detroit, Mich.
 Sautter, Robert A., Mt. Vernon
 Sawyer, Grace M., Woodward
 *Sawyer, Prince E., Sioux City (L.M.)
 *Sayre, Ivan K., St. Charles
 Scales, E. Thomas, Des Moines
 Scanlan, George C., DeWitt
 Scanlon, George H., Iowa City
 Schacht, Norman A., Fort Dodge
 Schaefer, Paul H., Chicago, Ill. (L.M.)
 Schaeferle, Lawrence G., Gladbrook
 Schaeferle, Martin J., Eagle Grove
 Schafer, Leander H., DeWitt
 Schanche, Arthur N., Ames
 Scharle, Theodore, Dubuque
 Scheffel, Melvin L., Malvern
 Scheibe, John R., Bloomfield
 Scheldrup, Eugene W., Iowa City
 Schiff, Joseph, Spokane, Washington
 Schill, Austin E., Des Moines
 Schissel, Donald, Des Moines
 Schlaser, Verne L., Des Moines
 Schnug, George E., Dows
 Scholl, Charles R., Ames
 Schoonover, Richard, Bloomfield
 Schrier, Harold L., Fort Madison
 Schrock, Christian E., Iowa City
 Schroeder, Adrian J., Marshalltown
 Schroeder, Frank N., Ryan
 Schroeder, Leslie V., Walcott
 Schropp, Rutledge C., Des Moines
 Schrupp, Joseph H., Dubuque (L.M.)
 Schueller, Charles J., Dubuque
 Schultz, Ivan T., Humboldt
 Schultz, Marvin H., Iowa City
 Schultz, Nelle E. T., Humboldt
 Schumacher, Donald P., Waverly
 Schutter, John M., Algona
 Schwartz, John W., Sioux City
 Sciscent, Verdi I., Waterloo
 Scott, Phillip A., Spirit Lake
 Scott, Sophie H., Des Moines (L.M.)
 Scoville, Victor T., Sioux City
 Seaman, Charles L., Cherokee
 Sear, John, Alden
 Sears, Richard H., Iowa City
 Sedlacek, Leo B., Cedar Rapids
 Seeborn, Paul M., Iowa City
 Seely, Harmon D., Cherokee
 Seibert, Cecil W., Waterloo
 Seidler, William A., Jr., Jamaica
 Seiler, Raymond A., Blairstown
 Sellards, Joseph W., Clarinda (L.M.)
 Sells, Benjamin B., Independence
 Selman, Ralph J., Ottumwa
 Selo, Rudolph A., Council Bluffs
 Senska, Frank, Brandon
 Senty, Elmer G., Davenport
 Severson, George J., Slater
 Severson, Wayne L., Slater
 Shafer, Arthur W., Davenport
 Shafer, Lee E., Davenport
 Shane, Robert S., Pilot Mound
 Shank, Raymond A., Cedar Rapids
 Shannon, Edwin R., Waterloo (L.M.)
 Shapiro, Seymour W., Des Moines
 Sharpe, Donald C., Dubuque
 *Shaw, Albert E., Des Moines
 Shaw, David F., Britt
 Shaw, Robert E., Waverly
 Shea, Thomas E., Storm Lake
 Sheeler, Ivan H., Des Moines
 Sheets, Raymond F., Iowa City
 Shelton, Charles D., Bloomfield (L.M.)
 Shepherd, Loyd K., Des Moines
 Sherman, Richard C., Los Angeles (L.M.)
 Shiffler, H. Kirby, Des Moines
 Shohet, Isaac H., Bode
 Shope, Charles D., Greenfield
 Shorey, Joseph R., Davenport
 Shrader, John C., Fort Dodge
 *Shuldberg, Arthur, Gunter, Ala.
 Shulkin, Sam H., Sioux City
 Shulman, Herbert, Waterloo
 Shurts, John J., Eldora
 Sibley, Edward H., Sioux City
 Siems, Lawrence L., Iowa City
 Simmons, Ralph R., Des Moines
 Singer, John R., Newton
 Singer, Siegmund F., Ottumwa
 Sinn, Irvin J., Williamsburg
 Sinning, Augustus, Iowa City (L.M.)
 Sinning, John E., Marshalltown
 Skaggs, Joseph T., Iowa City
 Skallerup, Glenn M., Red Oak
 Skelley, Paul B., Jr., Dubuque
 Skinner, Homer L., Des Moines
 Skultety, F. Miles, Iowa City
 Skultety, James A., Des Moines
 Slate, William G., Iowa City
 Sloan, Fred R., Waterloo
 Sloan, Fredric J., Cedar Rapids
 Smazal, Stanley F., Davenport
 Smead, Howard H., Des Moines
 Smead, Leslie L., Newton
 Smiley, George W., Oakdale
 Smiley, Ralph E., Mason City
 Smith, Andrew D., Mediapolis
 Smith, Anthony P., Waucoma
 Smith, Arthur F., Manning
 Smith, Cecil R., Wyoming
 *Smith, Charles B., Bowling Green, Ky.
 Smith, Elmer M., Eagle Grove
 Smith, Eugene, Waterloo
 Smith, Harold F., Iowa City
 Smith, Herman J., Des Moines
 Smith, Howard W., Woodward
 Smith, J. Ned, Iowa City
 Smith, John E., Clarence (L.M.)
 Smith, Lawrence D., Des Moines
 Smith, Rex I., Waterloo
 Smith, Richard W., Clarion
 Smith, Robert A., Albion
 Smith, Robert T., Granger
 Smith, Rodger B., Mason City
 Smith, S. Rodmond, Red Oak
 *Smouse, William O., Des Moines (L.M.)
 *Smrha, James A., Cedar Rapids
 Smyth, William T., Iowa City
 Smythe, Arnold M., Des Moines
 Snyder, Dean C., DeWitt
 Snyder, Raleigh R., Des Moines
 Sohm, Herbert A., Des Moines
 Sokol, Charles R., State Center
 Sola, Olav M., Des Moines
 Sones, Clement A., Des Moines
 Soper, Robert T., Mason City
 Sorensen, Elmer M., Red Oak
 Sorensen, Aral C., Davenport
 Sorenson, Kermit R., Sabula
 Sorenson, Philip W., Cedar Falls
 Southwick, William W., Marshalltown
 Spain, Robert T., Conrad (L.M.)
 Sparks, Francis R., Waverly (L.M.)
 Spear, William, Oakdale
 Spearing, Joseph H., Harlan
 Speidel, Glenn P., Hartford, Connecticut
 Spellman, George G., Sioux City
 Spellman, Martin T., Cedar Rapids
 Spencer, Philip L., Essex
 Sperow, Wendell B., Nevada
 Sperry, Frederick S., Clarinda
 Spevak, Jack J., Des Moines
 Spielhagen, Guenther F., Iowa City
 Spilman, Harold A., Ottumwa
 Springer, Floyd A., Des Moines
 Sprout, William M., Des Moines
 Stalford, John H., Sac City (L.M.)
 Stam, Nicholas C., Mason City
 Stamler, Frederic W., Iowa City
 Standefer, Joe M., Des Moines
 Standeven, James W., Oakland
 Stansbury, John E., Cedar Rapids
 Stark, Callistus H., Cedar Rapids
 Stark, Frederick M., Sioux City
 Starr, Charles F., Mason City (L.M.)
 Starry, Allen C., Sioux City

- Statton, Roy F., La Porte City
 Stauch, Martin O., Moorhead
 Stauch, Omar A., Sioux City
 Staudt, Alfred J., Waterloo
 Steenrod, Emerson J., Iowa Falls
 Steffens, Lincoln F., Dubuque
 Steffey, Fred L., Keokuk
 Stegmaier, Otto C., Davenport
 Stegman, Jacob J., Marshalltown
 Steinberger, George C., Des Moines
 Steindler, Arthur, Iowa City (L.M.)
 Stephen, Paul, Cedar Rapids
 Stephen, Raymond J., Cedar Rapids
 Stepp, James K., Manchester
 Sternagel, Fred, West Des Moines
 Sternberg, Walter A., Corona Del Mar, Calif. (L.M.)
 Sternhill, Irving, Mason City
 Sternhill, Isaac, Council Bluffs
 Stevens, Clark W., Dubuque
 Stevens, John D., Clarinda
 Stevenson, Eber F., Waterloo (L.M.)
 Steves, Richard J., Des Moines
 Stewart, John H., Ottumwa
 Stewart, John K., Clinton
 Stewart, William L., Mediapolis
 Stickler, Robert B., Des Moines
 Stinson, Alice C., Estherville (L.M.)
 Stitt, Paul L., Fort Dodge
 Stoakes, Charles S., Lime Springs
 Stober, Raymond W., Charles City
 Stojkovic, Joseph P., Iowa City
 Stolley, J. George, Moline
 Storck, Robert D., Dubuque
 Straub, Joseph J., Dubuque
 Strawn, John T., Des Moines
 Stribley, Harry A., Dubuque
 Stry, Herbert E., Osceola
 Stuart, Percy E., Nashua (L.M.)
 Stueland, Alvin J. R., Mason City
 Stumme, Ernest H., Denver
 ★Stutsman, Robert E., Miami, Florida
 Suchomel, Thomas F., Cedar Rapids
 Sullivan, John J., Oak Lawn, Illinois
 Sulzbach, John F., Burlington
 Summers, Thomas B., Iowa City
 Sun, Kuei shu, Ames
 Sunderbruch, John H., Davenport
 Sutton, Gerald H., Jr., Boone
 Svendsen, Reinert N., Decorah
 Swanger, Carroll E., Cresco
 Swann, Raymond O., Iowa City
 Swanson, Eric M., Iowa City
 Swanson, Gerald W., Lamoni
 Swanson, Leslie W., Mason City
 Swayze, V. Warren, Muscatine
 Sweeney, Lloyd J., Sanborn
 Swift, Frederick J., Maquoketa (L.M.)
 Swift, Frederick J., Jr., Maquoketa
 Sybenga, Jacob J., Pella
 Synhorst, John B., Des Moines
 Sywassink, George A., Muscatine
- Taber, Rodman E., Iowa City
 Tait, John H., Des Moines
 Tamisiea, Francis X., Missouri Valley
 Taylor, Charles B., Claremont, Calif. (L.M.)
 Taylor, Charles L., Pomeroy (L.M.)
 Taylor, James H., Clinton
 Taylor, Lawrence A., Ottumwa
 Taylor, Maude, Ottumwa
 Taylor, Robert S., Davenport
 Taylor, Wendel W., Sheffield
 Tempel, Paul F., Steamboat Rock
 Ten Eyck, Edward A., Iowa City
 Teufel, John C., Davenport (L.M.)
 Thaler, David, Cedar Rapids
 Tharp, Herbert M., Monroe
 Thatcher, Wilbur C., Fort Dodge
 Thein, Garfield M., Oelwein
 Theisen, Roy I., Dubuque
 Thielen, Edward W., Waterloo
 Thielen, John B., Fonda
 Thoman, William S., Sioux City
 Thomas, Clifford W., Mason City
 Thomas, Clyde E., Keystone
 Thomas, Colin G., Monticello
 Thomas, James H., Jr., Sibley
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 Thomas, William H., McGregor (L.M.)
 Thompson, E. Dean, Jefferson
 Thompson, Howard E., Dubuque
 Thompson, James R., Waterloo
 ★Thompson, James W., Camp Breckinridge, Ky.
 Thompson, Kenneth L., Oakland
 Thompson, Virginia D., Des Moines
 Thomsen, John G., Des Moines
 Thomsen, Thomas F., Red Oak (L.M.)
- Thorburn, Oral L., Ames
 Thornburg, William V., Guthrie Center (L.M.)
 ★Thornton, F. Eberle, Portsmouth, Va.
 Thornton, John W., Lansing
 Thornton, Thomas F., Waterloo
 Thornton, Thomas F., Jr., Waterloo
 Thorsness, Edwin T., Dubuque
 Thorson, John A., Dubuque
 Throckmorton, J. Fred, Des Moines
 Throckmorton, Jeannette D., Des Moines (L.M.)
 Throckmorton, Robert F., Des Moines (L.M.)
 Throckmorton, Scott L., Chariton
 Throckmorton, Tom B., Des Moines
 Throckmorton, Tom D., Des Moines
 Tice, Claude B., Mason City (L.M.)
 Tice, George I., Mason City
 Tice, W. Arnold, Waterloo
 Tice, Wayne K., Iowa City
 Tidrick, Robert T., Iowa City
 Tiedeman, John P., Sioux City
 Tierney, Edmund J., Sioux City
 Tierney, James M., Carroll
 Tilton, John J., Bellevue
 Tinley, Mathew A., Council Bluffs (L.M.)
 Titus, Elton L., Iowa City (L.M.)
 Todd, Donald W., Omaha, Nebr.
 Todd, Robert L., Burlington
 Tolliver, Hillard A., Charles City
 Top, Franklin H., Iowa City
 Toubes, Abraham A., Des Moines
 Tourney, Garfield, Miami, Florida
 TouVelle, Alwyn R., Bettendorf
 Towle, Robert A., Davenport
 Tracy, John S., Sioux City
 Trafton, Harold F., Council Bluffs
 Traister, John E., Eddyville
 Treichler, Howard P., Waterloo
 Trey, Bernard L., Marshalltown
 Treynor, Jack V., Council Bluffs
 Trier, Paul J., Des Moines
 Trotzig, Joseph P., Akron
 Troxel, John F., Cedar Rapids
 Troxell, Millard A., Cedar Rapids
 Trueblood, Clare A., Indianola
 Trumpe, William D., Cedar Rapids
 Trunnell, Thomas L., Waterloo
 Tucker, Francis C., Cedar Rapids
 Turner, George E., West Des Moines
 Turner, Howard V., Des Moines
 Turner, Rosalie C., Nashua
 Turner, Roy M., Armstrong
 Turner, William R., Fort Dodge
 Tyrrell, John E., Manchester
- ★Uchiyama, John K., Wichita Falls, Texas
 Underriner, Robert E., Holstein
 ★Unger, David, Des Moines
 Updegraff, Charles L., Boone
 Updegraff, Robert R., Des Moines
 Updegraff, Thomas R., Waterloo
 Utterback, Robert A., Iowa City
- Valiquette, Frank G., Sioux City
 Van Camp, Thomas H., Breda
 Vance, Margaret, San Diego, Calif.
 Vander Meulen, Herman C., Pella
 Vander Stoep, Harry L., Le Mars
 Vander Veer, Frank L., Janesville (L.M.)
 Van Epps, Clarence E., Iowa City (L.M.)
 Van Epps, Eugene F., Iowa City
 Vangsness, Ingmar U., Sioux City
 Van Metre, Paul W., Rockwell City
 Van Patten, E. Martin, Fort Dodge
 Van Tiger, William H., Eldora
 Van Werden, Benjamin D., Keokuk
 Van Zante, Peter, Pella
 Vaubel, Ellis K., Estherville
 Veldhouse, Richard H., Cedar Rapids
 Veltman, John F., Winterset
 Vespa, Raymond, Des Moines
 Victorine, Edward M., Cedar Rapids
 Vincent, Jack F., Fort Dodge
 Vincent, John W., Sioux City
 Viner, Thomas R., Leon
 Vineyard, Thomas L., Ottumwa
 Voelker, Chris A., Iowa City
 Voigt, Ernest J., Burlington
 Voigt, Franz O. W., Oskaloosa
 von Lackum, J. Kenneth, Cedar Rapids
 Voorhees, Philip H., Jamaica, N. Y.
 Vorhes, Carl E., Sheldon
 Vorisek, Elmer A., Des Moines
 Vorpahl, Rudolph A., Cedar Rapids
 Vosika, Edward J., Shelby
- Voss, Otto R., Davenport
- Waggoner, Charles V., Clinton
 Wagner, Donald J., Sioux City
 Wagner, Eugene C., Plainfield
 Wagner, James A., Pringhar
 Wahrer, Frederick L., Marshalltown
 Wainwright, Max T., Sioux City
 Walker, Charles C., Des Moines
 Walker, Glenn L., Burlington
 Walker, Harry L., Cedar Rapids (L.M.)
 Walker, Herbert P., Clarion (L.M.)
 Walker, Thomas G., Riceville
 Walker, Thomas S., Riceville (L.M.)
 Wall, David, Ames
 ★Wall, John M., Bryan A.F.B., Texas
 Walliker, Wilbur M., Clinton (L.M.)
 Walsh, Eugene L., Huntington, West Virginia
 Walston, Edwin B., Des Moines (L.M.)
 Walton, Seth G., Hampton
 Walz, Donald V., Iowa City
 Wanamaker, A. Roy, Hamburg
 Ward, Donovan F., Dubuque
 Ward, Lorraine W., Oelwein
 Ward, Thomas L., Arnold's Park
 Ware, Stephen C., Iowa City
 Ware, Thomas A., Des Moines
 Warner, Emory D., Iowa City
 Warner, Paul L., Des Moines
 Waterbury, Charles A., Jr., Waterloo
 Watson, Charles F., Fairfield
 Watson, Elbert J., Diagonal (L.M.)
 Watters, George H., Des Moines
 Watts, A. Fred, Creston
 Watts, Campbell F., Cedar Rapids
 Watts, Clyde F., Marengo
 Weaver, David F., Davenport
 Weaver, Kenneth H., Union
 Weaver, Ralph L., Cumberland
 Webb, Daniel R., Oakdale
 Weber, Frank N., Walnut
 Weber, Leslie E., Wapello
 Weber, William W., Pomeroy
 Weems, Nev E., Paulina
 Weih, Elmer P., Clinton
 Weikel, Vernon E., Sioux City
 Weinberg, Harry B., Davenport
 Weingart, Julius S., Des Moines
 Weir, Edward C., Council Bluffs (L.M.)
 ★Weir, Matt B., Atlantic
 Weis, Howard A., Davenport
 Weland, Regis E., Cedar Rapids
 Wells, Rodney C., Marshalltown
 Wentworth, Laydon S., Marble Rock
 Wentzien, Albert J., Tama
 Werner, Harold T., Fort Madison
 West, Aloy G., Council Bluffs
 West, Norman D., Avoca
 West, Walter E., Centerville
 Westly, G. Travis, Mason City
 Westly, Gabriel S., Manly
 Westly, J. Stephen, Mason City
 Weston, B. Raymond, Mason City
 Weston, Robert A., Des Moines (L.M.)
 Wetrich, Max F., Grand Junction
 Weybrauch, Robert A., Waterloo
 Weyer, Joseph J., Fort Dodge
 Wheeler, Richard A., Des Moines
 Whitaker, Ben T., Boone
 White, George H., Des Moines
 White, Paul A., Davenport
 Whitehouse, William N., Ottumwa
 Whitley, Ralph L., Osage (L.M.)
 Whitmer, Lysle H., Muscatine
 Whitmire, James E., Sumner
 Whitmire, William L., Sumner (L.M.)
 Wichern, Homer E., Des Moines
 Wicklund, Maurice M., Waterloo
 Wicks, Ralph L., Boone
 Wickstrum, Arthur P., Iowa City
 Widmer, James G., Wayland
 Widmer, Reuben B., Winfield
 Wiedemeier, Joseph L., Sioux City
 Wierzbinski, Francis A., Iowa City
 Wilcox, Delano, Malcom (L.M.)
 Wilcox, Dwain E., Atlantic
 Wilcox, Edgar B., Oskaloosa
 Wilcox, Keith E., Muscatine
 Wilcox, Robert A., Iowa City
 Wildberger, William C., Perry
 ★Wiley, Eugene D., Sioux City
 ★Wiley, Ralph E., Fontanelle
 Wilhelm, Raymond W., Sioux City
 Wilke, Frank A., Perry
 Wilkinson, Levi J., Laurel
 Willett, Wilton J., Manchester
 Williams, Edward B., Montezuma (L.M.)
 Williams, Frank S., Villisca (L.M.)

Williams, Lawrence B., Maquoketa
 Williams, Nathan B., Belle Plaine
 Wilson, Charles R., Manson
 Wilson, F. Dale, Davenport
 Wilson, Fredric L., Sioux City
 Wilson, Fredric W., Sioux City
 ★Wilson, Robert G., Clovis, N. M.
 Winder, Clifford D., Waterloo
 Winninger, Louis T., Waterloo
 Winter, F. Donald, Burlington
 Wirtz, Dwight C., Des Moines
 Wise, Arthur C., Iowa City
 Wise, James H., Cherokee
 ★Witte, Herbert J., San Francisco, Calif.
 Wolcott, Ruth F., Spirit Lake
 Wolf, Henry H., Elgin
 Wolf, William J., West Union
 *Wolfe, Joseph H., Iowa City
 Wolfe, Otis D., Marshalltown
 Wolfe, Otis R., Marshalltown
 Wolfe, Russell M., Marshalltown
 Wolfe, Wilson C., Ottumwa
 Wolfson, Harold, Kingsley
 Wolpert, Paul L., Onawa
 Wolters, Donald E., Estherville
 Wolverton, Benjamin F., Cedar Rapids

Wood, John R., Wadena
 Wood, Rollin W., Newton
 Woodard, Floyd O., Des Moines
 Woodbridge, James W., Madera, Calif.
 (L.M.)
 Woodburn, Chester C., Jr., Des Moines
 Woodhouse, George R., Vinton
 Woodhouse, Keith W., Cedar Rapids
 Woods, Andrew H., Wellesley Hills,
 Mass. (L.M.)
 Woodward, Lee R., Mason City
 Wooters, Richard C., Des Moines
 Workman, Robert D., Ruthven
 Wormhoudt, Herbert L., Ottumwa
 Worrell, James T., Keosauqua
 Wray, Clarence M., Iowa Falls (L.M.)
 Wray, Robert M., Cedar Rapids
 Wright, Thomas D., Newton
 Wright, Walter N., Rose Hill (L.M.)
 Wubbena, Arthur C., Rock Rapids
 Wurtzer, Ezra L., Clear Lake
 Wykoff, Sarah U., Des Moines
 Yamamoto, Masa, Iowa City
 *Yavorsky, George W., Belle Plaine
 (L.M.)
 Yetter, William L., Iowa City

Yocom, Albert L., Chariton
 York, Dallas L., Villisca
 Young, Ernest R., Dubuque (L.M.)
 Young, George G., Des Moines
 Young, Henry C., Bloomfield (L.M.)
 Young, Howard O., Marion
 Young, James J., Clinton
 ★Young, Richard A., Ft. Sam Houston,
 Texas
 Yugend, Sidney F., Indianola
 Zabloudil, Warren C., Preston
 Zager, Lewis L., Waterloo
 Zibilich, George J., Lone Tree
 Ziffren, Sidney E., Iowa City
 Zimmerer, Edmund G., Des Moines
 Zimmerman, George R., Iowa City
 ★Zoeckler, Samuel J., Ft. Sam Houston,
 Texas
 Zoller, Sherwood B., Fredericksburg
 Zuercher, Arlo R., Cedar Rapids
 Zukerman, Cecil M., Davenport

★ Military Service
 * Deceased
 (L.M.) Life Member

FIFTY YEAR CLUB MEMBERS

June 15, 1954

Adams, Ernest M.....Central City
 Agnew, Fred F.....Independence
 Aldrich, J. Frank.....Decatur, Ill.
 Barbour, Howard W.....Mason City
 Barton, Edwin G.....Ottumwa
 Beatty, Edward D.....Mallard
 Bell, Edward P.....Pleasantville
 Bierring, Walter L.....Des Moines
 Bigelow, Charles T.....LaGrange, Ill.
 Binford, William S.....Davenport
 Birney, Cleanthus E.....Estherville
 Boice, Clyde A.....Washington
 Bowers, Arthur S.....Orient
 Bullock, William E.....Lake Park
 Cantwell, John D.....Davenport
 Carson, Andros.....Des Moines
 Chase, William B., Sr.Des Moines
 Chittum, John H.Wapello
 Clasen, Henry W.....Cedar Falls
 Cole, Elmer J.....Woodbine
 Cooper, Jay C.....Villisca
 Crain, Lewis F.....Deep River
 Crain, Mattie M.....Deep River
 Cretzmeyer, Charles H.....Algona
 Crew, Arthur E.....Marion
 Dean, Frank W.....Council Bluffs
 Dean, William F.Osceola
 Dennison, John C.....Bellevue
 Donohoe, Anthony P.....Davenport
 Downing, Leroy M.....Cedar Rapids
 Dulin, Tarana J. G.....Iowa City
 Dunn, James.....Davenport
 Field, George A.....Des Moines
 Fields, Robert B.....La Porte City
 Foulk, Frank E.....Des Moines
 Franklin, George W.....Jefferson
 Fullerton, Oscar L.....Redding
 Gaard, Rasmus R.....Radcliffe
 Gardner, John R.....Lisbon
 Gearhart, George W.....Springville
 Gillmor, Benjamin F.....Red Oak
 Givens, H. Frank.....West Bend

Gray, Henry A.....Keokuk
 Griffin, John M.....Des Moines
 Gutch, Thomas E.....Albia
 Harkness, Gordon F.....Davenport
 Harrington, Burton.....Cedar Rapids
 Harris, Clinton E.....Grinnell
 Heady, Conda C.Bloomfield
 Heald, Clarence L.....Sigourney
 Heathman, Frank E.....Pocahontas
 Heles, John B.....Dubuque
 Henry, Clyde A.....Farson
 Hollis, Edward L.....Marengo
 Houser, Cass T.....Cedar Rapids
 Hull, Henry C.....Washington
 Jackson, James M.....Jefferson
 James, Peter E.....Audubon
 Janse, Phillip V.....Algona
 Jastram, Alfred H.....Remsen
 Jenkins, George A.....Albia
 Johnson, Albert P.....Sigourney
 Johnson, Amos F.....Manilla
 Johnson, George M.....Oberlin, Ohio
 Jones, Harry J.....Cedar Rapids
 Jones, Louis H.....Wall Lake
 Kauffman, William A.....Marshalltown
 Kennedy, Elizabeth Smith.....Oelwein
 Kerlin, Jared D.....Des Moines
 Kern, Lester C.....Waverly
 King, Oran W.....Des Moines
 Kisor, Frank H.....Mechanicsville
 Kuhl, Augustus B.....Davenport
 Kulp, Raymond R.....Davenport
 Kyle, William S.....Washington
 Lincoln, Simon E.....Des Moines
 Luke, Edward.....Coin
 Lundvick, Arthur W.....Gowrie
 McBurney, George F.....Belmond
 McDowall, Gilbert T.....Gladbrook
 McDowell, William O.....Grundy Center
 McLaughlin, Charles W.....Washington
 Mantz, Russell L.....Cedar Rapids
 Marble, Pearl L.....Liscomb

Maresh, George W.....	Denver, Colo.	Roost, Frederick H.....	Sioux City
Mason, Stella M.....	Mason City	Ruml, Wentzle.....	Cedar Rapids
Merritt, Arthur M.....	Des Moines	Safely, Agnes I.....	Cedar Rapids
Meyers, Frank W.....	Dubuque	Sams, Joseph H.....	Clarion
Mills, Frank W.....	Ottumwa	Sanders, William E.....	Pasadena, Calif.
Minassian, Harootune A.....	Des Moines	Scott, Sophie H.....	Des Moines
Morrison, Wesley J.....	Cedar Rapids	Sellards, Joseph W.	Clarinda
Morse, Charles H.....	Eagle Grove	Shelton, Charles D.....	Bloomfield
Mott, William H.....	Farmington	Sinning, Augustus.....	Iowa City
Murchison, Kenneth.....	Sidney	Smith, John E.....	Clarence
Murray, Frederick G.....	Cedar Rapids	Spain, Robert T.....	Conrad
Neal, Emma J.....	Cedar Rapids	Steindler, Arthur.....	Iowa City
Nelson, Frederick L.....	Ottumwa	Sternberg, Walter A.....	Corona Del Mar, Calif.
Niblock, George F.....	Denver, Colo.	Stinson, Alice C.....	Estherville
Nicoll, David T.....	Mitchellville	Stuart, Percy E.....	Nashua
O'Donoghue, James H.....	Storm Lake	Teufel, John C.....	Davenport
Oggel, Herman D.....	Maurice	Thomas, William H.....	McGregor
Olsen, Martin I.....	Des Moines	Throckmorton, R. Fred.....	Des Moines
Pace, Arthur A.....	Toledo	Tinley, Mathew A.....	Council Bluffs
Pagelsen, Otto H.....	Pharr, Texas	Tinsman, Eugene S.....	Orient
Patterson, John N.....	Burlington	Van Epps, Clarence E.....	Iowa City
Peck, Raymond E.....	Davenport	Walker, Harry L.....	Cedar Rapids
Phillips, Albin B.....	Clear Lake	Waliker, Wilbur M.....	Clinton
Posner, Edward R.....	Des Moines	Walsh, Thomas N.....	Hawkeye
Price, Alfred S.....	Des Moines	Walston, Edwin B.....	Des Moines
Quire, Frank E.....	Lynnville	Watson, Elbert J.....	Diagonal
Rambo, David T.....	Ottumwa	Weir, Edward C.....	Council Bluffs
Rankin, William.....	Keokuk	Westenberger, Joseph C.....	St. Ansgar
Raw, Elmer J.....	Pierson	Weston, Robert A.....	Des Moines
Redmond, Thomas M.....	Monticello	Whitley, Ralph L.....	Osage
Richardson, Leon F.....	Collins	Whitmire, William L.....	Sumner
Rinker, George E.....	Oto	Woodbridge, James W.....	Madera, Calif.
Robb, James B.....	Chariton	Wray, Clarence M.....	Iowa Falls
Robinson, Robert E.....	Waverly	Wright, Walter N.....	Rose Hill
Rogers, Claude B.....	Earlville	Young, Ernest R.....	Dubuque
		Young, Henry C.....	Bloomfield

MEMBERSHIP ROSTER of the WOMAN'S AUXILIARY

To the IOWA STATE MEDICAL SOCIETY

1954

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Acker, Mrs. R. D., Waterloo	Bairnson, Mrs. G. A., Cedar Falls	Beye, Mrs. C. L., Sioux City
Acker, Mrs. W. H., Waterloo	Baker, Mrs. C. J., Fort Dodge	Bickley, Mrs. D. W., Waterloo
Aid, Mrs. F. H., Burlington	Baker, Mrs. W. E., Des Moines	Bickley, Mrs. John, Waterloo
Albert, Mrs. Henry, Des Moines	Bakody, Mrs. J. T., Des Moines	Bierman, Mrs. Martyn, Council Bluffs
Alberts, Mrs. M. E., Des Moines	Barnett, Mrs. S. W., Cedar Falls	Biersborn, Mrs. B. M., State Center
Alden, Mrs. Oscar, Red Oak	Barrent, Mrs. M. E., Clinton	Billingsley, Mrs. J. W., Newton
Allison, Mrs. M. P., Northwood	Barton, Mrs. E. G., Ottumwa	Birge, Mrs. R. F., Des Moines
Alt, Mrs. L. P., Dubuque	Barton, Mrs. R. L., Dubuque	Bisgard, Mrs. C. V., Harlan
Amesbury, Mrs. H. A., Clinton	Bastron, Mrs. H. C., Red Oak	Black, Mrs. J. E., Sioux City
Amick, Mrs. Perry, Des Moines	Bates, Mrs. M. T., Des Moines	Black, Mrs. J. R., Jefferson
Anderson, Mrs. D. C., Stanhope	Bean, Mrs. Elmer O., Council Bluffs	Blackstone, Mrs. M. A., Sioux City
Anderson, Mrs. H. M., Strawberry Point	Beatty, Mrs. H. G., Creston	Blaha, Mrs. V. B., Marshalltown
Anderson, Mrs. Harold, Des Moines	Beaumont, Mrs. F. H., Council Bluffs	Blair, Mrs. D. W., Des Moines
Anderson, Mrs. J. D., Des Moines	Beckman, Mrs. P. W., Perry	Bliss, Mrs. W. R., Ames
Anderson, Mrs. Stanley, Onawa	Beddoes, Mrs. M. G., Waterloo	Blome, Mrs. A. L., Ottumwa
Anderson, Mrs. W. D., Des Moines	Beebe, Mrs. J. R., Mt. Pleasant	Blome, Mrs. G. C., Ottumwa
Angell, Mrs. C. A., Des Moines	Beebe, Mrs. K. P., Mt. Pleasant	Blume, Mrs. D. B., Sioux City
Anthony, Mrs. W. E., Ottumwa	Beeh, Mrs. E. F., Fort Dodge	Boden, Mrs. W. C., Sioux City
Arkin, Mrs. Archie, Des Moines	Bell, Mrs. R. S., Burlington	Boe, Mrs. Henry, Sioux City
Ashline, Mrs. G. H., Keokuk	Bendixen, Mrs. F. C., LeMars	Boller, Mrs. G. C., Waterloo
Augspurger, Mrs. B. B., Des Moines	Bening, Mrs. J. F., Clarinda	Bond, Mrs. T. A., Des Moines
Austin, Mrs. A. T., Ottumwa	Beran, Mrs. Joseph, Waterloo	Bone, Mrs. H. C., Des Moines
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 Brinker, Mrs. M. H., Jefferson
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 Brown, Mrs. A. W., Des Moines
 Brown, Mrs. C. A., Sioux City
 Brown, Mrs. W. B., Mt. Pleasant
 Brummitt, Mrs. C. F., Centerville
 Bruner, Mrs. J. M., Des Moines
 Brundige, Mrs. R. E., Akron
 Brunner, Mrs. W. J., Akron
 Brush, Mrs. C. H., Shenandoah
 Bullock, Mrs. G. D., Inwood
 Burcham, Mrs. T. A., Des Moines
 Burgeson, Mrs. Floyd, Des Moines
 Burke, Mrs. E. T., Des Moines
 Burleson, Mrs. M. W., Ft. Dodge
 Burns, Mrs. R. I., Des Moines
 Burr, Mrs. C. L., Des Moines
 Burroughs, Mrs. H. H., Sioux City
 Bushmer, Mrs. Alexander, Orange City
 Bushnell, Mrs. J. W., Sioux City
 Buxton, Mrs. O. C., Jr., Webster City

Callaghan, Mrs. A. J., Jr., Sioux City
 Canady, Mrs. G. F., Jefferson
 Carey, Mrs. E. T., Clinton
 Carpenter, Mrs. R. C., Marshalltown
 Carroll, Mrs. T. J., Sibley
 Carryer, Mrs. C. H., Des Moines
 Carson, Mrs. R. W., Winterset
 Cary, Mrs. Walter, Dubuque
 Castell, Mrs. J. W., Fairfield
 Catlin, Mrs. K. A., Clarinda
 Chapler, Mrs. K. M., Dexter
 Chase, Mrs. W. B., Des Moines
 Chase, Mrs. W. B., Jr., Des Moines
 Chase, Mrs. Walter, Rippey
 Chestnut, Mrs. Paul, Winterset
 Chittum, Mrs. J. H., Wapello
 Christiansen, Mrs. C. C., Grand Mound
 Clappison, Mrs. Gordon, DeWitt
 Clapsaddle, Mrs. D. W., Clear Lake
 Clark, Mrs. Howard, Stuart
 Clark, Mrs. J. P., Estherville
 Clark, Mrs. R. E., Manchester
 Cloud, Mrs. A. B., Guthrie Center
 Cochran, Mrs. A. M., Perry
 Cody, Mrs. W. E., Sioux City
 Coffin, Mrs. L. A., Farmington
 Cogley, Mrs. J. P., Council Bluffs
 Cohen, Mrs. S. A., Council Bluffs
 Colbert, Mrs. L. D., Royal
 Coleman, Mrs. F. C., Des Moines
 Collignon, Mrs. U. J., Council Bluffs
 Conzett, Mrs. D. C., Dubuque
 Cook, Mrs. K. G., Fairfield
 Cook, Mrs. S. H., Rock Rapids
 Cooper, Mrs. C. N., Waterloo
 Cooper, Mrs. Dean, Fort Dodge
 Cooper, Miss Zada, Villisca
 Coppoc, Mrs. L. E., Ottumwa
 Coriden, Mrs. T. L., Sioux City
 Corn, Mrs. H. H., Des Moines
 Corton, Mrs. R. V., Waterloo
 Coughlan, Mrs. C. H., Fort Dodge
 Coughlan, Mrs. D. W., Des Moines
 Coyne, Mrs. K. M., Burlington
 Cox, Mrs. R. L., Estherville
 Crandall, Mrs. Jack, Marshalltown
 Crawford, Mrs. R. H., Burlington
 Crawford, Mrs. W. M., Burlington
 Cressler, Mrs. F. E., Churdan
 Crow, Mrs. G. B., Burlington
 Crowley, Mrs. D. F., Des Moines
 Crowley, Mrs. D. F., Jr., Des Moines
 Croxdale, Mrs. Edward, Villisca
 Crumpton, Mrs. R. C., Webster City
 Cunningham, Mrs. M. B., Norwalk

Dalager, Mrs. R. D., Ottumwa
 Darrow, Mrs. Clarence, Dubuque
 Davey, Mrs. W. P., Sioux City
 Dawson, Mrs. E. B., Fort Dodge
 Dean, Mrs. Abbott, Council Bluffs
 Decker, Mrs. H. G., Des Moines
 Decker, Mrs. J. C., Sioux City
 Deranleau, Mrs. R. F., Perry
 DeYarman, Mrs. K. T., Morning Sun
 Diamond, Mrs. Bernard, Waterloo
 Dick, Mrs. Frederick, Cedar Falls
 Dilley, Mrs. H. H., Des Moines
 Dimsdale, Mrs. L. J., Sioux City
 Ditto, Mrs. B. L., Burlington
 Dobson, Mrs. R. A., Sioux City

Dohnalek, Mrs. D. W., Waukon
 Donahue, Mrs. J. C., Centerville
 Donlin, Mrs. R. E., Harlan
 Donohue, Mrs. Edmund, Sioux City
 Donovan, Mrs. M. J., Perry
 Dorner, Mrs. R. A., Des Moines
 Dorsey, Mrs. T. J., Jr., Fort Dodge
 Down, Mrs. H. I., Sioux City
 Downing, Mrs. A. H., Des Moines
 Downing, Mrs. J. A., Des Moines
 Downing, Mrs. W. L., LeMars
 Downs, Mrs. V. S., Ottumwa
 Drew, Mrs. E. J., Des Moines
 Drier, Mrs. W. C., Waterloo
 Driver, Mrs. R. W., Waterloo
 Drown, Mrs. R. E., Fort Dodge
 Duewall, Mrs. R. H., Des Moines
 Duling, Mrs. Raymond, Sioux City
 Dunlevy, Mrs. J. H., Fairfield
 Dunn, Mrs. D. E., Estherville
 Dunn, Mrs. R. C., Des Moines
 Durdieker, Mrs. S. W., West Des Moines
 Dvorak, Mrs. J. E., Sioux City
 Dwyer, Mrs. B. B., Clinton
 Dwyer, Mrs. Robert, Clinton
 Dyson, Mrs. J. E., Des Moines
 Dyson, Mrs. R. E., Des Moines

Eastburn, Mrs. Harvey, Burlington
 Ebinger, Mrs. E. W., Ottumwa
 Echternacht, Mrs. A. P., Fort Dodge
 Edington, Mrs. Frank, Spencer
 Edwards, Mrs. C. V., Council Bluffs
 Edwards, Mrs. R. R., Centerville
 Egbert, Mrs. D. S., Fort Dodge
 Eggermayer, Mrs. G. W., Elliott
 Eggleston, Mrs. A. A., Burlington
 Elliott, Mrs. O. A., Des Moines
 Ellis, Mrs. H. G., Des Moines
 Ellison, Mrs. G. M., Clinton
 Ellyson, Mrs. C. D., Waterloo
 Ely, Mrs. Frank, Des Moines
 Ely, Mrs. L. O., Des Moines
 Emanuel, Mrs. D. G., Ottumwa
 Emmons, Mrs. M. B., Clinton
 Eneboe, Mrs. E. M., Hawarden
 Englemann, Mrs. A. T., Sioux City
 Ennis, Mrs. H. H., Manchester
 Entringer, Mrs. A. J., Dubuque
 Evans, Mrs. John, Winterset

Faber, Mrs. L. A., Dubuque
 Felter, Mrs. A. G., Van Meter
 Fickel, Mrs. J. D., Red Oak
 Field, Mrs. G. A., Des Moines
 Fieselmann, Mrs. G. F., Spencer
 Finch, Mrs. G. H., Des Moines
 Fisch, Mrs. R. J., LeMars
 Fisher, Mrs. W. A., Creston
 Fitzgerald, Mrs. J. D., Sloan
 Flynn, Mrs. C. H., Clarinda
 Fordyce, Mrs. Frank, Johnston
 Foss, Mrs. J. F., Burlington
 Fox, Mrs. Stephan, Ottumwa
 Frank, Mrs. L. J., Sioux City
 Franklin, Mrs. George, Jefferson
 Frankle, Mrs. A. H., Des Moines
 Fraser, Mrs. J. B., Des Moines
 Frederickson, Mrs. A. R., Lansing
 Frenkel, Mrs. H. S., Clarinda
 Friday, Mrs. W. C., Burlington
 Frink, Mrs. L. E., Reinbeck
 Frink, Mrs. L. F., Spencer
 Furumoto, Mrs. Kiyoshi, Keosauqua

Garland, Mrs. J. C., Marshalltown
 Gaukel, Mrs. Leo A., Onawa
 Gault, Mrs. J. B., Creston
 Gee, Mrs. K. J., Shenandoah
 Gelperin, Mrs. Abraham, Des Moines
 George, Mrs. E. M., Des Moines
 George, Mrs. L. A., Remsen
 Gerard, Mrs. R. S., Waterloo
 Gerken, Mrs. J. F., Waterloo
 Gessford, Mrs. H. H., George
 Gibbon, Mrs. W. H., Sioux City
 Gibson, Mrs. D. N., Des Moines
 Gibson, Mrs. P. E., Des Moines
 Giegerich, Mrs. W. F., Atlantic
 Giles, Mrs. Clark, Council Bluffs
 Gilfillan, Mrs. C. D. N., Bloomfield
 Gilfillan, Mrs. E. O., Bloomfield
 Gilfillan, Mrs. H. J., Jr., Bloomfield
 Gillmor, Mrs. B. F., Red Oak
 Gingles, Mrs. E. E., Onawa
 Gittler, Mrs. Ludwig, Fairfield
 Gittins, Mrs. T. R., Sioux City
 Glick, Mrs. Julius, Clinton
 Goldberg, Mrs. L., Des Moines
 Goodman, Mrs. L. O., Marshalltown

Gordon, Mrs. Arnold, Des Moines
 Gottsch, Mrs. E. J., Shenandoah
 Gould, Mrs. G. R., Grundy Center
 Gower, Mrs. Walter, Fort Dodge
 Graham, Mrs. J. W., Sioux City
 Graber, Mrs. H. E., Fairfield
 Graves, Mrs. John, Dubuque
 Gray, Mrs. C. W., Ottumwa
 Greenhill, Mrs. Solomon, Des Moines
 Greteman, Mrs. T. J., Dubuque
 Griffin, Mrs. C. C., Dyersville
 Griffin, Mrs. J. M., Des Moines
 Griffith, Mrs. W. H., Clinton
 Grossmann, Mrs. E. B., Orange City
 Grossman, Mrs. Milton, Sioux City
 Gugle, Mrs. L. J., Ottumwa
 Gunn, Mrs. R. E., Boone
 Gurau, Mrs. H. H., Des Moines
 Gutch, Mrs. C. F., Clinton

Haggar, Mrs. D. K., Hawarden
 Haines, Mrs. D. J., Des Moines
 Hall, Mrs. F. F., Webster City
 Hamilton, Mrs. B. C., Jefferson
 Hansell, Mrs. W. W., Des Moines
 Hansen, Mrs. F. A., Red Oak
 Hansen, Mrs. R. R., Marshalltown
 Hanson, Mrs. Carl, Waterloo
 Harnagel, Mrs. E. J., Des Moines
 Harrington, Mrs. R. J., Sioux City
 Harris, Mrs. D. D., Marshalltown
 Harris, Mrs. R. R., Dubuque
 Hartley, Mrs. B. D., Mt. Pleasant
 Hartman, Mrs. Howard, Waterloo
 Hastings, Mrs. R. A., Ottumwa
 Hayden, Mrs. M. D., Marcus
 Hayek, Mrs. J. M., Des Moines
 Hayne, Mrs. W. M., Des Moines
 Hearst, Mrs. George, Cedar Falls
 Heeren, Mrs. R. H., Des Moines
 Hegg, Mrs. L. R., Rock Valley
 Heileman, Mrs. Robert, Sioux City
 Heimann, Mrs. V. R., Sioux City
 Heise, Mrs. C. A., Jr., Jewell
 Heise, Mrs. H. R., Marshalltown
 Henderson, Mrs. J. L., Cedar Falls
 Hendrickson, Mrs. A. H., Sioux City
 Hennessy, Mrs. J. D., Council Bluffs
 Henry, Mrs. C. A., Farson
 Henstorf, Mrs. H. R., Shenandoah
 Herman, Mrs. J. C., Boone
 Herrick, Mrs. Walter, Ottumwa
 Heusinkveld, Mrs. H. J., Clinton
 Hickenlooper, Mrs. C. B., Winterset
 Hickman, Mrs. C. S., Centerville
 Hicks, Mrs. E. O., Clinton
 Hicks, Mrs. W. K., Sioux City
 Hill, Mrs. D. E., Clinton
 Hill, Mrs. L. F., Des Moines
 Hines, Mrs. R. E., Des Moines
 Hirst, Mrs. D. V., Council Bluffs
 Hoeven, Mrs. E. B., Ottumwa
 Hoffman, Mrs. A. A., Waterloo
 Holloway, Mrs. C. E., Des Moines
 Hombach, Mrs. W. P., Council Bluffs
 Honke, Mrs. E. M., Sioux City
 Hooper, Mrs. L. E., Indianola
 Hornaday, Mrs. W. R., Des Moines
 Hosford, Mrs. H. F., Burlington
 Howar, Mrs. B. F., Webster City
 Howard, Mrs. D. E., Sioux City
 Howard, Mrs. L. G., Council Bluffs
 Howell, Mrs. E. B., Ottumwa
 Hoyt, Mrs. J. L., Creston
 Hughes, Mrs. P. K., Des Moines
 Hughes, Mrs. R. O., Ottumwa
 Hulse, Mrs. R. A., Burlington
 Huston, Mrs. D. F., Burlington
 Huston, Mrs. M. D., Cedar Falls

Ingham, Mrs. Paul, Mapleton
 Irving, Mrs. Noble, Jr., West Des Moines

Jackson, Mrs. J. S., Mt. Pleasant
 Jackson, Mrs. J. M., Jefferson
 Jacobs, Mrs. Carl, Sioux City
 Jacobs, Mrs. E. L., Conrad
 James, Mrs. A. D., Des Moines
 Jeffries, Mrs. M. E., Marshalltown
 Jeffries, Mrs. R. R., Waukon
 Jenkins, Mrs. G. D., Burlington
 Jensen, Mrs. K. V., Clarinda
 Johnson, Mrs. A. O., Sioux City
 Johnson, Mrs. F. N., Boone
 Johnson, Mrs. G. R., Ottumwa
 Johnson, Mrs. R. M., Fort Des Moines
 Johnston, Mrs. C. H., Des Moines
 Johnston, Mrs. G. B., Estherville
 Jones, Mrs. C. C., Spencer
 Jones, Mrs. H. W., Sioux City

Jongewaard, Mrs. A. J., Jefferson
Jongewaard, Mrs. R. E., Scranton
Jordan, Mrs. M. S., Clinton
Jowett, Mrs. J. F., Clinton
Joynt, Mrs. A. J., Waterloo
Joynt, Mrs. M. J., LeMars
Juel, Mrs. E. M., Atlantic

Kahler, Mrs. H. V., Reinbeck
Kane, Mrs. T. E., Boone
Kaplan, Mrs. D. D., Sioux City
Kas, Mrs. T. D., Sutherland
Kassmeyer, Mrs. J. C., Dubuque
Kast, Mrs. D. H., Des Moines
Katherman, Mrs. Charles, Sioux City
Katzmann, Mrs. F. S., Des Moines
Kelberg, Mrs. M. R., Sioux City
Kell, Mrs. J. F., Sioux City
Kelley, Mrs. E. J., Des Moines
Kelly, Mrs. D. H., Des Moines
Kelly, Mrs. J. F., Sioux City
Kelly, Mrs. W. J., Dubuque
Kechen, Mrs. G. F., Dubuque
Kerr, Mrs. K. M., Paton
Kershner, Mrs. F. O., Clinton
Kersten, Mrs. E. M., Fort Dodge
Kersten, Mrs. J. R., Fort Dodge
Kestel, Mrs. J. L., Waterloo
Keyser, Mrs. E. L., Marshalltown
Kiesau, Mrs. M. F., Postville
Kiesling, Mrs. H. F., Lehigh
Kilgore, Mrs. B. F., Des Moines
King, Mrs. D. H., Spencer
King, Mrs. R. C., Clinton
Kingsbury, Mrs. K. R., Ottumwa
Kirch, Mrs. Walter, Des Moines
Kirkegaard, Mrs. Smith, Estherville
Kitson, Mrs. W. W., Atlantic
Kleinburg, Mrs. H. E., Des Moines
Klocksien, Mrs. H. L., Des Moines
Klok, Mrs. G. J., Council Bluffs
Kluever, Mrs. H. C., Fort Dodge
Knight, Mrs. E. C., Marshalltown
Knipfer, Mrs. R. L., Jesup
Knott, Mrs. P. D., Sioux City
Knowles, Mrs. F. L., Fort Dodge
Knudsen, Mrs. H. K., Clinton
Knutsen, Mrs. Arne, Sioux City
Koelling, Mrs. L. H., Newton
Krause, Mrs. R. E., Ottumwa
Krigsten, Mrs. J. M., Sioux City
Krueger, Mrs. N. L., Stuart
Kuhl, Mrs. R. H., Creston
Kuhn, Mrs. M. A., Waterloo

Lachner, Mrs. B. J., Des Moines
Lagen, Mrs. M. S., Dubuque
Langdon, Mrs. F. B., Des Moines
Larimer, Mrs. R. N., Sioux City
Larsen, Mrs. E. A., Centerville
Larsen, Mrs. F. S., Fort Dodge
Larsen, Mrs. H. T., Fort Dodge
Larsen, Mrs. L. V., Harlan
Larsen, Mrs. M. O., Hawarden
Larson, Mrs. Gerald, Elk Horn
LaRue, Mrs. J. L., Anita
Latchem, Mrs. C. W., Des Moines
Laube, Mrs. P. J., Dubuque
Lavender, Mrs. John, George
Lee, Mrs. Wayne, Burlington
Leffert, Mrs. F. B., Centerville
Leighton, Mrs. L. L., Fort Dodge
Leiter, Mrs. H. C., Sioux City
Lenaghan, Mrs. R. T., Clinton
Leonard, Mrs. T. K., Madrid
Liken, Mrs. J. A., Creston
Limburg, Mrs. J. I., Sr., Jefferson
Limburg, Mrs. J. I., Jr., Jefferson
Linder, Mrs. E. E., Ogden
Lindholm, Mrs. C. V., Armstrong
Lister, Mrs. K. E., Ottumwa
Lohmann, Mrs. C. J., Burlington
Lohr, Mrs. P. E., Churdan
Long, Mrs. L. L., Atlantic
Longworth, Mrs. W. H., Boone
Loomis, Mrs. F. G., Waterloo
Losh, Mrs. C. W., Des Moines
Losh, Mrs. C. W., Jr., Des Moines
Lovejoy, Mrs. E. P., Des Moines
Lovelady, Mrs. Ralph, Sidney
Lowry, Mrs. C. F., Council Bluffs
Luehrsmann, Mrs. B. C., Dyersville
Luke, Mrs. Edward, Coin
Lutton, Mrs. J. D., Sioux City

McBride, Mrs. Robert, Sioux City
McCarthy, Mrs. F. D., Sioux City
McClellan, Mrs. E. D., Des Moines
McClellan, Mrs. John, Onawa

McClurg, Mrs. F. H., Fairfield
McCoy, Mrs. J. T., Cedar Falls
McCuiston, Mrs. H. M., Sioux City
McGahey, Mrs. W. B., Webster City
McGeehon, Mrs. R. C., Indianola
McGilvra, Mrs. A. L., Sioux Center
McGuire, Mrs. R. A., Fairfield
McIntosh, Mrs. P. D., Ottumwa
McKay, Mrs. R. V., Dubuque
McKitterick, Mrs. J. C., Burlington
McMurray, Mrs. H. N., Burlington
McNamara, Mrs. R. J., Dubuque
McNamee, Mrs. J. H., Des Moines
McTaggart, Mrs. W. B., Fort Dodge
Magee, Mrs. E. E., Waterloo
Mahoney, Mrs. J. D., Council Bluffs
Maixner, Mrs. W. D., Ottumwa
Maloy, Mrs. W. H., Shenandoah
Manderscheid, Mrs. R. A., Boone
Manthey, Mrs. C. E., Waterloo
Maplethorpe, Mrs. C. W., Toledo
Maplethorpe, Mrs. C. W., Jr., Toledo
Marble, Mrs. E. J., Marshalltown
Marble, Mrs. P. L., Liscomb
Marble, Mrs. P. L., Marshalltown
Maris, Mrs. William, Sioux Center
Mark, Mrs. M. S., Des Moines
Marker, Mrs. J. I., Davenport
Marquis, Mrs. George, Des Moines
Marsh, Mrs. F. E., Council Bluffs
Marsh, Mrs. F. E., Jr., Council Bluffs
Martin, Mrs. Lee, Council Bluffs
Mason, Mrs. R. P., Des Moines
Mathiasen, Mrs. E. B., Council Bluffs
Mathiasen, Mrs. H. W., Council Bluffs
Mathiasen, Mrs. John, Council Bluffs
Matthews, Mrs. R. J., Clarinda
Maxwell, Mrs. C. T., Sioux City
Megorden, Mrs. W. H., Mt. Pleasant
Mehler, Mrs. Frank, New London
Meredith, Mrs. L. K., Des Moines
Merillat, Mrs. H. C., Des Moines
Merkel, Mrs. A. E., Des Moines
Merkel, Mrs. Byron, Des Moines
Merritt, Mrs. F. B., Dubuque
Meyer, Mrs. A. K., Clinton
Meyer, Mrs. P. G., Manchester
Meyers, Mrs. R. P., Ottumwa
Michaelson, Mrs. Don, Boone
Mikelson, Mrs. C. J., Waterloo
Miller, Mrs. R. L., Waterloo
Miller, Mrs. Robert, Waterloo
Minkel, Mrs. R. M., Fort Dodge
Mirick, Mrs. D. F., Clinton
Mitchell, Mrs. C. H., Cincinnati
Moe, Mrs. R. H., Griswold
Moerke, Mrs. R. F., Burlington
Moermond, Mrs. J. O., Hull
Moes, Mrs. M. J., Dubuque
Monnig, Mrs. P. G., Des Moines
Moore, Mrs. E. E., Fort Dodge
Moore, Mrs. Fred, Des Moines
Moore, Mrs. H. H., Ottumwa
Moore, Mrs. R. M., Des Moines
Moorehead, Mrs. H. B., Underwood
Morgan, Mrs. F. W., Ottumwa
Morgan, Mrs. J. N., Fairfield
Morgan, Mrs. R. L., Sioux City
Moriarity, Mrs. D. L., Council Bluffs
Moriarty, Mrs. J. F., Atlantic
Morrison, Mrs. R. E., Waterloo
Morrissey, Mrs. W. J., Des Moines
Morton, Mrs. M. T., Estherville
Mountain, Mrs. G. E., Des Moines
Mugan, Mrs. R. C., Sioux City
Mullmann, Mrs. A. J., Perry
Mulsow, Mrs. F. W., Cedar Rapids
Munger, Mrs. E. E., Spencer
Munns, Mrs. R. E., Hampton
Murphy, Mrs. C. B., Alton
Murphy, Mrs. G. C., Waterloo
Murray, Mrs. J. H., Burlington
Myers, Mrs. J. J., Postville

Nakashima, Mrs. V. K., Dubuque
Needles, Mrs. R. M., Atlantic
Neff, Mrs. Herbert, Guthrie Center
Nelken, Mrs. Leonard, Clinton
Nelson, Mrs. Arnold, Des Moines
Nelson, Mrs. F. L., Ottumwa
Nelson, Mrs. Lawrence, Ottumwa
Nelson, Mrs. L. C., Jefferson
Nelson, Mrs. R. J., Clinton
Newland, Mrs. D. O., Des Moines
Nicholson, Mrs. C. G., Des Moines
Nicoll, Mrs. C. A., Panora
Nielsen, Mrs. R. F., Cedar Falls
Norment, Mrs. J. E., Clinton
Noun, Mrs. L. J., Des Moines
Noun, Mrs. M. H., Des Moines

Ober, Mrs. F. G., Burlington
O'Brien, Mrs. L. J., Fort Dodge
O'Donnell, Mrs. J. E., Clinton
O'Donoghue, Mrs. A. F., Sioux City
Oelrich, Mrs. C. D., Sioux Center
O'Leary, Mrs. F. B., Sibley
Olin, Mrs. E. E., Dubuque
Olsen, Mrs. M. I., Des Moines
Olsen, Mrs. R. E., Milton
Olson, Mrs. R. L., Northwood
Olson, Mrs. S. O., Des Moines
Osborn, Mrs. C. R., Dexter
Orelup, Mrs. D. N., Ottumwa
Osincup, Mrs. P. W., Sioux City
Osten, Mrs. B. H., Northwood
O'Toole, Mrs. L. C., LeMars
Otto, Mrs. Paul, Fort Dodge
Owca, Mrs. A. S., Centerville

Pahlas, Mrs. H. M., Dubuque
Paige, Mrs. R. T., LaPorte City
Painter, Mrs. J. C., Dubuque
Palchett, Mrs. C. L., Fairfield
Paragas, Mrs. M. R., Creston
Parry, Mrs. R. E., Scranton
Parsons, Mrs. J. M., Des Moines
Paschal, Mrs. G. A., Webster City
Patterson, Mrs. R. A., Webster City
Paulsen, Mrs. H. B., Harris
Paulus, Mrs. J. W., Dubuque
Payne, Mrs. H. C., Des Moines
Pearlman, Mrs. L. R., Des Moines
Pearson, Mrs. G. J., Burlington
Pedersen, Mrs. A. M., Council Bluffs
Pedersen, Mrs. P. D., Council Bluffs
Peggs, Mrs. H. J., Creston
Peisen, Mrs. C. J., Des Moines
Penly, Mrs. D. H., Cedar Falls
Pester, Mrs. George, Council Bluffs
Petersen, Mrs. D. C., Burlington
Petersen, Mrs. E. C., Atlantic
Petersen, Mrs. M. T., Atlantic
Petersen, Mrs. V. W., Clinton
Pfohl, Mrs. A. C., Dubuque
Phelps, Mrs. C. R., Ottumwa
Phelps, Mrs. G. D., Waterloo
Phillips, Mrs. A. B., Des Moines
Pierson, Mrs. L. E., Sioux City
Pitluck, Mrs. H. L., Laurens
Plager, Mrs. V. H., Waterloo
Poore, Mrs. S. D., Villisca
Porter, Mrs. C. E., Redfield
Porter, Mrs. Richard, Des Moines
Porter, Mrs. R. J., Des Moines
Porter, Mrs. S. D., Grinnell
Posner, Mrs. E. R., Des Moines
Posner, Mrs. E. R., Jr., Des Moines
Powell, Mrs. L. D., Des Moines
Powell, Mrs. R. A., Shenandoah
Powers, Mrs. G. H., Shenandoah
Powers, Mrs. J. L., Estherville
Preece, Mrs. Wade, Waterloo
Prewitt, Mrs. L. H., Ottumwa
Priestley, Mrs. J. B., Des Moines
Province, Mrs. William, Dubuque
Ptacek, Mrs. J. L., Webster City
Pugh, Mrs. P. H., Sioux City
Putnam, Mrs. C. L., Des Moines
Puntenney, Mrs. A. W., Boone

Quinn, Mrs. F. P., Dubuque
Ralston, Mrs. F. P., Knoxville
Rambo, Mrs. D. T., Ottumwa
Rambo, Mrs. E. F., Webster City
Ramsdell, Mrs. S. T., Clarinda
Rater, Mrs. D. L., Ottumwa
Rausch, Mrs. G. R., Sioux City
Readinger, Mrs. H. M., New London
Redfield, Mrs. E. L., Des Moines
Reed, Mrs. A. I., Estherville
Reeder, Mrs. J. E., Sioux City
Reeder, Mrs. J. E., Jr., Sioux City
Render, Mrs. N. D., Clarinda
Richey, Mrs. G. L., Centerville
Rider, Mrs. H. E., Sioux City
Riggert, Mrs. Leonard, Clinton
Rindskopf, Mrs. W., Des Moines
Ritter, Mrs. E. F., Centerville
Rizzo, Mrs. Frank, Sibley
Robert, Mrs. R. L., Waterloo
Roberts, Mrs. J. B., Ottumwa
Rogers, Mrs. C. B., Earlville
Rohwer, Mrs. R. T., Sioux City
Rominger, Mrs. C. R., Waukon
Ross, Mrs. A. J., Perry
Rowley, Mrs. R. D., Burlington
Rowney, Mrs. G. W., Sioux City
Royal, Mrs. M. A., Des Moines
Rudersdorf, Mrs. Howard, Sioux City
Rusk, Mrs. R. P., Dubuque

Russell, Mrs. E. P., Burlington
Rust, Mrs. E. A., Webb
Ryan, Mrs. Allen, Harlan
Ryan, Mrs. C. J., Creston
Ryan, Mrs. C. M., Sioux City
Ryan, Mrs. Martin, Sioux City
Ryan, Mrs. R. A., Fairfield

Saar, Mrs. J. L., Jr., Burlington
Sampson, Mrs. C. E., Creston
Sanders, Mrs. M. G., Fort Dodge
Sands, Mrs. Sidney, Des Moines
Sattler, Mrs. D. G., Kalona
Sauer, Mrs. H. E., Marshalltown
Sayre, Mrs. I. K., St. Charles
Schacht, Mrs. N. A., Fort Dodge
Schafer, Mrs. L. N., DeWitt
Scharle, Mrs. Theodore, Dubuque
Schill, Mrs. A. E., Des Moines
Schissel, Mrs. D. J., Des Moines
Schlaser, Mrs. V. L., Des Moines
Schrock, Mrs. C. E., Sioux City
Schroeder, Mrs. A. J., Marshalltown
Schroeder, Mrs. F. N., Ryan
Schwartz, Mrs. John, Sioux City
Sciscent, Mrs. V. L., Waterloo
Scoville, Mrs. V. T., Sioux City
Seabloom, Mrs. J. L., Red Oak
Seidler, Mrs. W. A., Jamaica
Seidler, Mrs. William, Jr., Jamaica
Selman, Mrs. R. J., Ottumwa
Selo, Mrs. Rudolph, Council Bluffs
Sharpe, Mrs. D. C., Dubuque
Sheeler, Mrs. Ivan, Des Moines
Shepherd, Mrs. L. K., Des Moines
Shiffer, Mrs. H. K., Des Moines
Shrader, Mrs. J. C., Fort Dodge
Shulkin, Mrs. S. H., Sioux City
Shulman, Mrs. Herbert, Waterloo
Sibley, Mrs. E. H., Sioux City
Singer, Mrs. S. F., Ottumwa
Skelley, Mrs. P. B., Dubuque
Skultety, Mrs. J. A., Des Moines
Sloan, Mrs. F. R., Waterloo
Smead, Mrs. H. H., Des Moines
Smith, Mrs. A. D., Mediapolis
Smith, Mrs. Eugene, Waterloo
Smith, Mrs. H. W., Woodward
Smith, Mrs. J. E., Clarence
Smith, Mrs. L. D., Des Moines
Smith, Mrs. Robert T., Granger
Smith, Mrs. S. R., Red Oak
Smythe, Mrs. A. M., Des Moines
Snyder, Mrs. D. C., DeWitt
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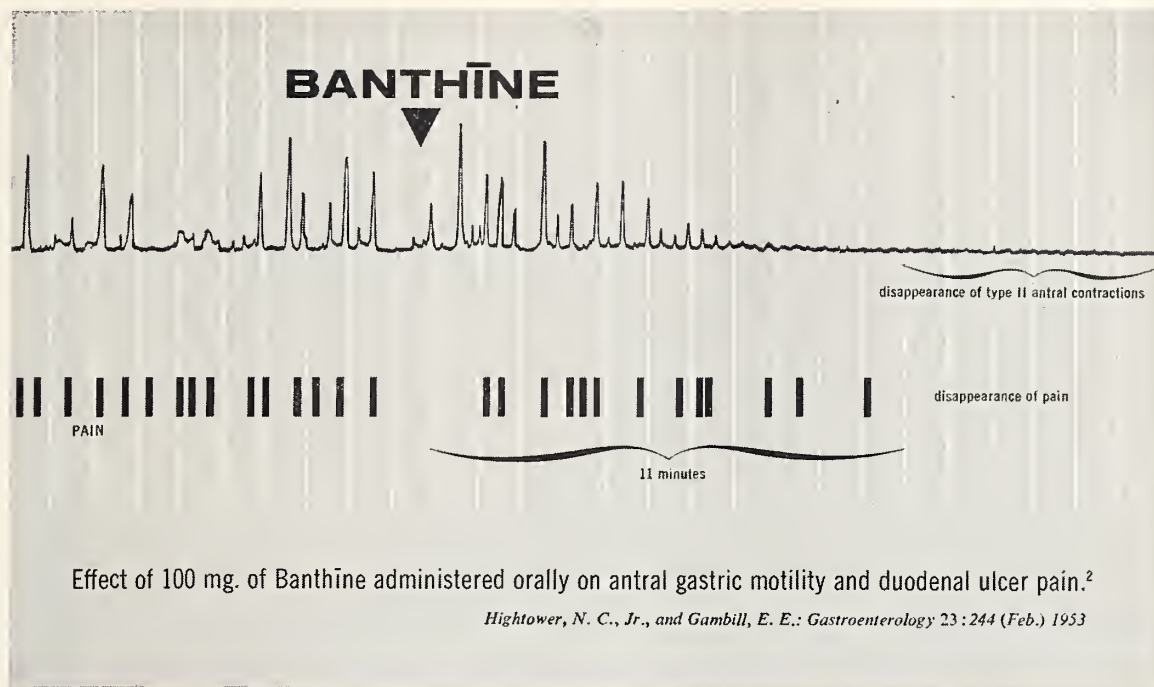
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The effect on motor activity is generally more pronounced and less variable than on secretion; pain relief is usually prompt; a high degree of effectiveness is noted in ambulatory ulcer patients.

Ruffin, J. M.; Texer, E. C., Jr.; Carter, D. D., and Baylin, G. J.: J.A.M.A. 153:1159 (Nov. 28) 1953.

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The Month in Washington

Washington, D. C.—The controversial health reinsurance issue has come back into prominence, and under conditions that make the whole question about as complicated as it can get. The bill would have the federal government underwrite voluntary health insurance plans if they agree to experiment with risks not usually covered.

Although this measure is a major part of President Eisenhower's health program, it became bogged down in the House Interstate and Foreign Commerce Committee when widespread opposition developed. Then the committee chairman, Rep. Charles E. Wolverton (R.-N.J.), turned to one of his favorite subjects, a plan for federal guarantee of private loans to health facilities for construction and equipment. This bill, however, was not supported by the administration.

In an effort to placate the opposition, Mr. Wolverton offered to eliminate a number of objectionable features from the mortgage guarantee bill. At the same time there were reports that he proposed to merge this bill with the administration-supported reinsurance bill. Meanwhile, Henry J. Kaiser made two special trips to Washington to help out his friend, Mr. Wolverton, by putting his weight behind the mortgage loan idea. That was not surprising, inasmuch as Mr. Kaiser had helped to draw up the bill, which would greatly benefit health centers such as those started on the West Coast by the Kaiser Foundation.

Mr. Kaiser, saying he was producing a film to promote the mortgage loan plan, went to the unusual lengths of making a direct appeal to Washington news correspondents to write favorable copy about the bill.

While these Wolverton-Kaiser maneuverings were taking place on the mortgage bill, it became apparent that President Eisenhower was not ready to abandon the reinsurance idea. He called a number of executives of major life insurance companies to the White House to try to impress them with the merits of reinsurance and in other ways indicated he still wanted to see the bill passed this session. Secretary Hobby, whose original testimony for reinsurance had been restrained, also joined in the last-minute campaign. But it appeared the tangle might be too complicated even for Mr. Eisenhower to unravel before adjournment.

Most other parts of the Eisenhower health program were moving through Congress, even though some were off schedule. (Of the major bills, AMA opposes only reinsurance.) Legislation to expand the Hill-Burton hospital construction program cleared what might have been a serious obstacle when it was reported out by the Senate committee. Compared with the House bill, the Senate



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bill gave more discretion to state health authorities in use of funds for constructing facilities for the chronically ill, for nursing homes, and for health centers. However, the Senate would require that funds earmarked for rehabilitation centers be used for the stated purpose. The Senate also would rule out the possibility of U. S. grants to centers devoted solely to treatment. Unless the facility could qualify as a diagnostic center, or as a diagnostic-treatment center, it could not be eligible under the Senate bill. This safeguard was not in the House bill.

Of the remaining legislation of interest to the medical profession, the status at this writing was about as follows:

The doctor draft amendment, to strengthen Defense Department's hand in dealing with physicians who might be security risks, had passed the Senate, been reported by the House committee, and was almost a law. Also about to be enacted was a provision liberalizing medical-expense deductions from taxable income. The long-dormant bill to transfer responsibility for Indians' health matters from the Indian Bureau in Interior Department to Public Health Service in the Department of Health, Education, and Welfare was pointed toward enactment, but might possibly be held up by objections of Senators from a few western states. The Interior Department had dropped its original objection.

The House-passed social security bill, with the compulsory coverage of physicians eliminated, was before the Senate Finance Committee, where anything could happen. Two bills of medical interest already had been passed by both houses and signed into law. One prohibits the shipment of fireworks into a state where fireworks are illegal, and the other relieves Army medical officers of the technical responsibility for supervising preparation of food.

A reassuring note was sounded by President Eisenhower when he forwarded to Congress the controversial International Labor Organization convention on minimum standards of social security with a recommendation that it not be ratified. His message said most of the points—including a suggestion for socialized medicine—were not proper subjects for the Congress to deal with.

V-A SEEKS PSYCHIATRISTS

The V-A is attempting to recruit a considerable number of psychiatrists for work exclusively with outpatients in its clinics, and, in addition, wishes to hire chiefs for eight of those centers, one of which is at Des Moines. The announced objective in broadening the program is to shorten the hospitalization of service-connected cases or to obviate the need for hospitalization completely. Only service-connected N-P's are eligible for outpatient treatment, but the V-A says there are 500,000 of them.

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	Dihydrostreptomycin	6	0	6
	Distrycin	0	0	0
		Cochlear damage % of patients		
		Mild	Moderate	Total
Cat given the same amount of Distrycin has normal reflex.	Streptomycin	0	0	0
	Dihydrostreptomycin	12	3	15
	Distrycin	0	0	0

*Heck, W.E.; Lynch, W.J., and Graves, H.L.: *Acta oto-laryng.* 43:416, 1953.

Distrycin dosage is the same as for streptomycin. In tuberculosis the routine dose is 1 Gm. twice weekly, in conjunction with daily para-aminosalicylic acid or Nydrasid (isoniazid). In the more serious forms of tuberculosis, Distrycin may be given daily, at least until the infection has been brought under control.

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PERSONALS

Dr. H. A. Gray, a Life Member of the Iowa State Medical Society, permanently closed his office during the final week in May. He had practiced in Keokuk for 55 years.

Dr. Robert L. Phifer, an associate of **Dr. W. G. Bessmer**, at Davenport, for the past six years, is to begin a three-year fellowship in orthopedics at the Mayo Clinic, in Rochester, Minnesota, on July 1.

Creighton University Medical School has announced the promotion of **Dr. J. P. Cogley**, of Council Bluffs, from associate professor to professor of clinical surgery on its faculty. He has taught at Creighton throughout the past 31 years.

It being the fiftieth anniversary of his beginning medical practice, citizens of Diagonal honored **Dr. E. J. Watson** at a dinner, parade and afternoon program on June 15.

Dr. E. L. Manning has opened an EENT practice in the First National Building, in Davenport, after having been a member of the West Davenport Clinic for five years.

Dr. W. E. Ash, a Council Bluffs psychiatrist and the medical director of St. Bernard's Hospital, has been appointed clinical professor of psychiatry and neurology at the Creighton University Medical School.

On May 31, **Dr. W. B. Bean**, head of the Department of Internal Medicine at S.U.I., left on a tour of Army medical installations in France and Occupied Germany as special consultant to the surgeon general. In addition to his consultant duties, he is to deliver several lectures, one of them at the Ciba Foundation Colloquium in London. He is one of four American doctors who have been invited to address that conference.

Dr. R. Sanford Cook, of Tipton, has undertaken a three-year residency in radiology at the V-A Hospital in Iowa City. He began it on June 1.

Dr. A. E. McMahon, a specialist in internal medicine, has joined the staff of the Park Hospital, at Mason City. He is a graduate of the University

of Wisconsin and of the S.U.I. College of Medicine; he served a three-year residency at the V-A Hospital in Des Moines; he has completed several years of military service; and he has practiced briefly at Stevens Point, Wisconsin.

Fifty physicians attended a scientific meeting sponsored by the staff of the Sioux Valley Memorial Hospital, Cherokee, on May 13. The guest speakers included **Dr. William Graham**, **Dr. Payton Pratt** and **Dr. Leroy Lee**, all of Creighton University College of Medicine, and their subjects were arthritis, anemia and hematuria, respectively. **Dr. H. Charles Ellsworth**, of Cherokee, was chairman.

At the meeting of the American Academy of Neurology held in Washington, D. C., early in May, **Dr. A. L. Sahs**, professor of neurology at S.U.I., read a paper on meningitis and acted as chairman of a seminar on the physiology and diseases of the hypothalamus.

Dr. Otis R. Wolfe, of Marshalltown, read a paper on the surgery of children's cataracts at the ninth assembly of the International College of Surgeons, in São Paulo, Brazil, early in May. He was appointed general secretary of the EENT section of the College.

The Central Clinical Research Club, an organization of physicians in the internal-medicine departments of the medical schools at the state universities of Michigan, Minnesota, Wisconsin, Illinois and Iowa, at Northwestern University, at the Mayo Clinic and Foundation, at the University of Chicago, at St. Louis University and at Washington University (St. Louis), convened at Iowa City on May 29. Membership is limited to 100, not more than 10 of whom may be from a single institution, and semiannual meetings are held at which members hear reports of the research in progress at the host school.

Drs. L. E. January, **Jack Davies**, **Robert Hodges**, **John Carter**, **R. F. Sheets**, **Paul Seeborn**, **Sidney Ziffren**, **I. V. Ponseti** and **Richard Eckhardt** presented the program.

Dr. John R. Eisenach and **Dr. Richard A. Bunting**, recent graduates of the University of Nebraska who are interning at the Nebraska University Hospital, in Omaha, have announced their in-

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tention of opening an office for general practice in Shenandoah on July 1.

Pediatricians and orthopedists of Woodbury County, along with public-health officials and physiotherapists, met with **Dr. R. H. Heeren**, Deputy Commissioner of Public Health and Director of the Division of Communicable Diseases, on May 25, to be instructed in standard evaluatory procedures as regards poliomyelitis in the age group of children who have participated in the Salk tests there. The last of the series of Salk shots was scheduled for administration on June 8. **Mrs. Olive Farr**, technical director of the school of physical therapy at S.U.I., demonstrated procedures, and **Dr. Charles P. McHugh**, city-county public health department director, was chairman of the meeting.

The Henry and Anna Bartsch Endowment, which will provide an annual scholarship for an Iowa woman medical student and an annual medical internship for an Iowa woman, has been established by **Dr. Anna Bartsch Dunne**, of Washington D. C. Dr. Dunne once lived at Burlington.

On May 21, **Dr. Norma Adams** became a member of the professional staff at the Mental Health Institute in Independence. Dr. Adams is a graduate of the Marquette University Medical School, and received her psychiatric training at Milwaukee Sanitarium and the Menninger Institute.

Dr. Andros Carson, formerly of Elliott and now living in Des Moines, was guest of honor at the June 10 graduation exercises of the University of Chicago Medical School. Nearly 92 years old, Dr. Carson is the only surviving member of the 1890 class at Rush Medical College. He is a Life Member of the Iowa State Medical Society.

Dr. John E. Gottsch, recently separated from the U.S.A.F., has formed an association with **Dr. Frank Lindaman**, of Tampa, Florida, for the practice of orthopedic surgery there.

Dr. Frederick L. Wahrer, of Marshalltown, is chairman of the section on otorhinolaryngology of the International College of Surgeons' meeting to be held in Chicago, September 7-10. The section is to have three half-day sessions by itself, one in combination with the ophthalmologists, and a luncheon program.

Dr. Arthur W. Horst will complete his internship at Broadlawns Hospital, in Des Moines, on July 1, and will locate in Riverside, a suburb of

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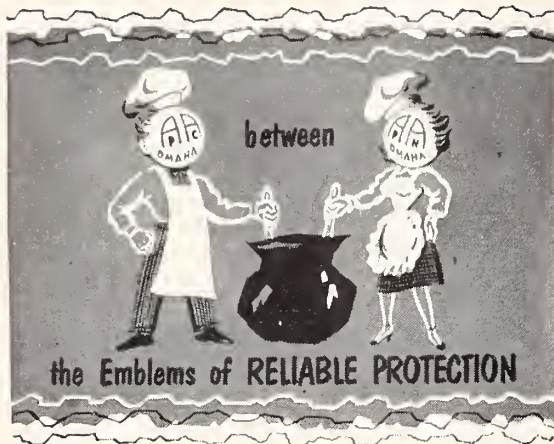
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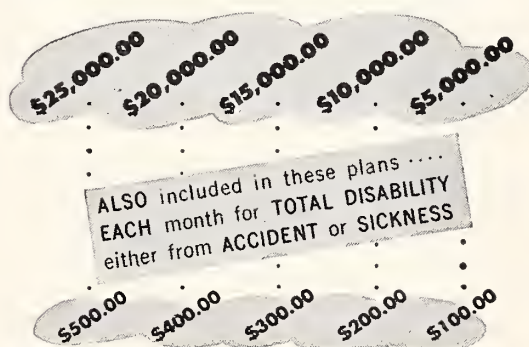
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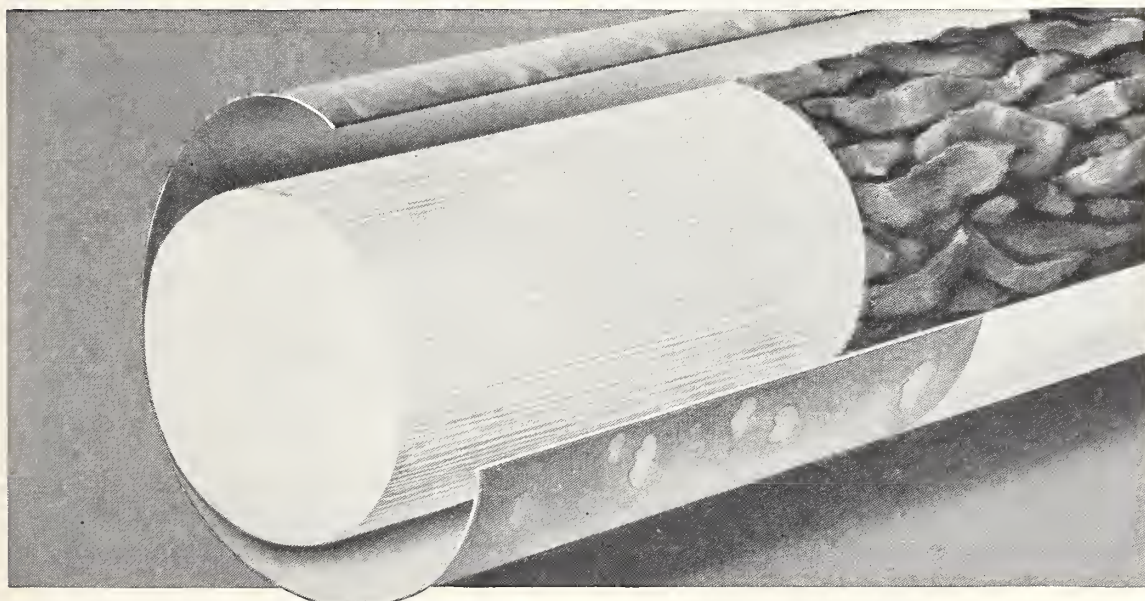
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CANCER CHEMOTHERAPY

In the last few years, there has been a new twist in the search for methods for controlling cancer. In the words of Rhoads, writing in *SCIENCE* for January 15, 1954, a third phase has been reached in the development of chemical means for restraint of neoplastic disease. Earlier phases were concerned with (1) agents or procedures that cause atrophy of specific tissues (hormonal treatment of breast and prostatic cancers, radioactive isotopes of phosphorus and iodine), and (2) compounds that are injurious to cells in direct ratio to their rates of growth (nitrogen mustards, folic acid antimetabolites).

The third phase is based on the thought that cells of different types differ from one another specifically in their chemical composition. This has been shown to be true with regard to the cell nucleic acid. In other words, the nucleic acids of cancer cells and of normal cells differ in their basic chemical structure. Thus, rational chemotherapy of a cancer can be approached by giving a compound that selectively injures those cells, leaving normal cells unchanged.

At the Sloan-Kettering Institute for Cancer Research, work in this third phase has been going on since 1946. One of the products of the program is 6-mercaptopurine. This agent has now been under clinical study for a little more than one year. Although not curative, it has indeed been useful for the control of some types of leukemia. In a large measure, 6-mercaptopurine has afforded practical support for Rhoads' optimistic belief that the new phase of chemotherapy will "yield new means for cancer control in man within the foreseeable future."

G-P, 9:33, (May) 1954

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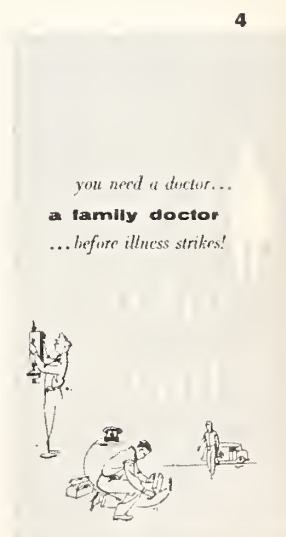
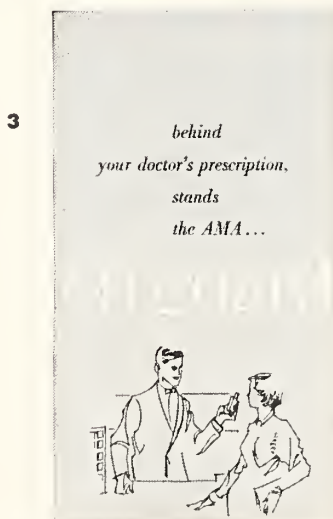
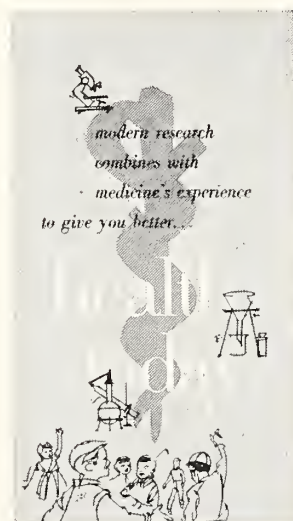
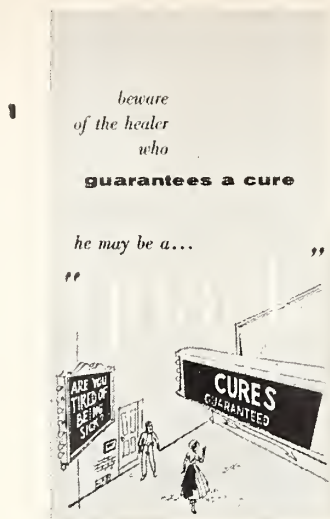
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The Surgical Treatment of Peptic Ulcer

OWEN H. WANGENSTEEN, M.D.*

MINNEAPOLIS, MINN.

PEPTIC ULCER—STILL AN IMPORTANT PROBLEM

DESPITE ALL THE vaunted new medications which have been proposed, no ideal remedy is yet available which will prove a happy solution for all the manifold manifestations of the peptic ulcer diathesis.

Peptic ulcer still continues a challenging problem. We know that its origins are traceable primarily to an abundant secretion of gastric juice with a high digestive power, owing to its content of hydrochloric acid and pepsin. However, many persons who have very responsive stomachs, capable of secreting large amounts of acid gastric juice, do not have peptic ulcer.

ABETTORS OF THE PEPTIC ULCER DIATHESIS

A number of conditions which fail to augment gastric secretion nevertheless promote the ulcer diathesis and lower the threshold to ulcer production. Anemia of the mucosa in those segments of the digestive tract which may come in contact with gastric juice increases the ease of ulcer formation, and even temporary depression of blood pressure below 70 mm. Hg. for 3 minutes can do so.¹ In fact, any change which affects the normal homeostatic pattern of the mucosa in those segments of the alimentary tract which may come in contact with the acid-peptic juice appears to lower the threshold. Fatigue, cold and anoxia appear to be strong abettors of the ulcer diathesis. Adrenergic stimuli, which give rise to vessel spasm, and consequently to anemia of the mucosae over which acid-peptic juice may ply, abet it. Histamine-in-beeswax has proved a very useful tool in these explorations.

LOCATION OF ULCER

The most frequent site for peptic ulcer appears to be the duodenum. The next most frequent location is the stomach. Observations in this Clinic relating to the reflux of gastric juice into the esophagus suggest quite definitely that manifestations of acid-peptic disease in the esophagus are more common than is generally believed.² In 1949, the relief of so-called "idiopathic stricture" of the esophagus was reported in patients at this Clinic, following a conventional three-quarter gastric resection.³ In the laboratory shortly thereafter, experiments on dogs and cats, in which the esophagus was perfused with gastric juice obtained from isolated canine gastric pouches, showed the extreme sensitivity of esophageal mucosa to acid-peptic juice. In fact, as a logical sequence of these clinical and experimental observations, I feel that so-called "idiopathic" stricture of the esophagus as well as "spontaneous perforation" of the esophagus in man, in all likelihood, is a manifestation of acid-peptic digestion of the esophagus.

The great sensitivity of the esophageal mucosa to injury by acid-peptic juice had not been anticipated and came as a great surprise. In fact, it would probably be quite safe to suggest that all squamous epithelium is far more susceptible to digestive injury by acid-peptic juice than is columnar epithelium protected in part by mucous-secreting glands.

The only other areas in which peptic ulcers are observed are in the jejunum following the establishment of gastro-jejunal stomas, or spontaneously in a Meckel's diverticulum.

DEFENSE OF THE DESIGNATION "PEPTIC ULCER"

A well-known student of the peptic ulcer problem once made the suggestion that the correct

* Professor of Surgery, University of Minnesota Medical School.

designation for ulcer resulting from digestion by gastric juice should be "acid-ulcer."¹ The great sensitivity of the esophageal mucosa to injury by acid-peptic juice constitutes a good test of the validity of retaining the designation *peptic*. Whereas the esophageal mucosa does show distinctive effects of injury when subjected to perfusion with hydrochloric acid of pH₁, by contrast, when gastric juice obtained from an isolated dog's pouch of the same acidity is used, there are unmistakable evidences of far greater digestive action upon the perfused esophagus, owing to the presence of pepsin. Perforations of the esophagus were never observed when the esophagus was perfused with hydrochloric acid, but employment of gastric juice of the same pH was followed by perforations quite readily.

RESISTANCE OF GASTRIC MUCOSA TO ACID-PEPTIC JUICE

Since the day of John Hunter, the question has frequently been asked: "Why does not the stomach digest itself?" It is still a good question. It is well known that the great secretory capacity of mucous-secreting glands in the tubules of the stomach cannot be exhausted. In this function, undoubtedly, resides a good deal of the native resistance of the gastric mucosa against injury by acid-peptic juice. And, inasmuch as gastric ulcer is frequently observed in the absence of distinctly high values for gastric acid, it would appear that there are other abetting factors which lower the threshold of the gastric mucosa to injury by acid-peptic juice. Gastric ulcers should be studied with reference to the content of mucus in the gastric tubules adjacent to the ulcer. In patients who develop gastric ulcer there may be some defect in the protective action with which the gastric mucosa ordinarily is so richly endowed.

It is known that in the presence of pyloric obstruction, ulcers may be observed in the stomach. Since Pavlov made this observation long years ago, anyone who has worked with isolated canine gastric pouches in the laboratory has had occasion to observe that obstruction to outflow of the gastric juice may be accompanied by the development of an ulcer within the pouch. Moreover, vagotomy which reduces gastric acidity may be followed by gastric ulcer in man and in experimental animals because of gastric retention attending the gastric atony of vagotomy. It should be said, however, that of all the mucosae which come in contact with acid-peptic juice the gastric mucosa appears to be the most resistant to injury by the gastric juice. If this were not so, presumably everyone would have a gastric ulcer.

Duodenal ulcers have a tendency to occur just beyond the pyloric outlet. The pH of the duodenal content beyond the common opening of the bile duct and the pancreatic duct of Wirsung is such that the pH of the ejected content from the stomach is raised quickly by the admixture with bile and pancreatic juice to a level at which it loses its peptic activity.

SPECIAL CONSIDERATIONS

Mortality—Whereas there have been sharp declines in the mortality of acute appendicitis during the past 20 years, and a less striking decline in the mortality of acute intestinal obstruction during the past decade, there has been only a ten per cent reduction in the mortality of peptic ulcer as revealed by the Vital Statistics of the United States during the same period.

DEATH RATES FOR PEPTIC ULCER, APPENDICITIS AND INTESTINAL OBSTRUCTION, 1930-50

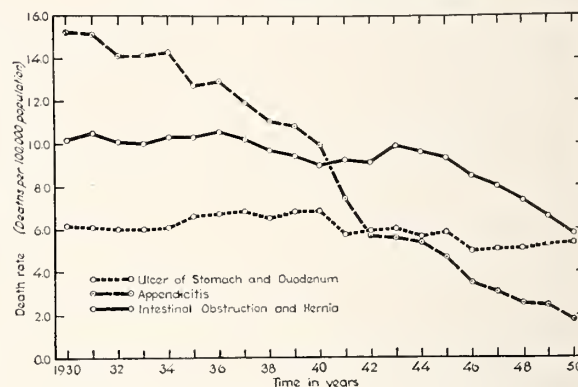


Fig. 1. There has been only a 10 per cent decrease in the mortality of peptic ulcer as shown by the vital statistics of the United States over a period of many decades. Meanwhile, however, there has been a continuing reduction in the mortality of appendicitis. In fact, the present annual mortality of appendicitis is only 15 per cent of what it was twenty years ago. During the past decade, the mortality of bowel obstruction has declined steadily, the present mortality being 65 per cent of what it was a decade ago.

Hemorrhage—My colleague Dr. James H. Casey (1954) has studied the deaths from peptic ulcer in the State of Minnesota for the year 1952. A total of 129 deaths from that cause was recorded in the vital statistics for the state. The largest single lethal factor was hemorrhage; 46 per cent of all the deaths were owing to this cause alone. One third of these patients had never had a prior serious complication, even though the majority of these patients had a long-standing history of peptic ulcer. These observations point up the necessity of focusing earnest and heedful attention upon hemorrhage as the most frequent cause of death from this pathology. Our profession needs to inform itself more completely and accurately on the serious threat of hemorrhage. The continuing mortality is owing in large measure to the circumstance that hemorrhage has been viewed as a complication that will respond to conservative management. With very few exceptions, instances of massive hemorrhage from whatever cause have become the object of concern to surgeons, but peptic ulcer appears to be such an exception. This situation is in need of readjustment. Inasmuch as effective means of dealing with peptic ulcer are generally available, it would appear that patients who have had episodes of hemorrhage should not be held off indefinitely from the protective influence of an

adequate operation. The immediate risk to life can be reduced by earlier resort to an operation which will stop the bleeding. At the same time, protection will be afforded against recurrent hemorrhage in that a satisfactory operation thwarts the ulcer diathesis effectively and lastingly.

Figure 2 reveals that the large mortality from peptic ulcer occurs between the ages of 40 and 70. Between the ages of 50 and 70, the mortality of peptic ulcer today is as great as it was from ap-

MORTALITY FROM INTESTINAL OBSTRUCTION
U. S. Census of 1949

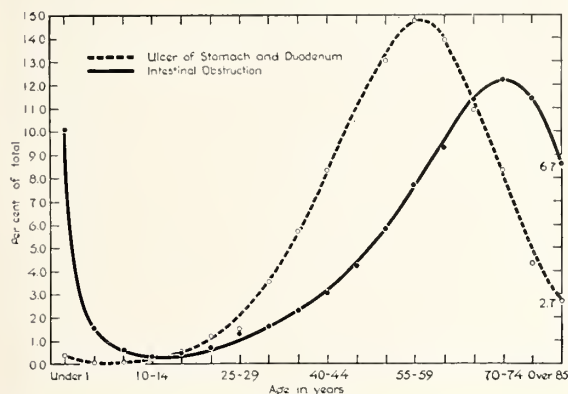


Fig. 2. The mortality of duodenal ulcer and bowel obstruction, at various ages of life, showing per cent of total deaths in 5-year periods. Grand totals: peptic ulcer 7,809; intestinal obstruction 9,854. It is to be noted that 75 per cent of the mortality from peptic ulcer occurs between the ages of 40 and 70. Moreover, between the ages of 50 and 70, the mortality of peptic ulcer is reminiscent of the death rate from appendicitis of two decades ago.

On the contrary, the mortality of bowel obstruction is largest in the first few years of life, and again towards the end of life. This circumstance is readily apparent in that, during the first year of life particularly, such difficult and hazardous obstructions as meconium ileus, intestinal atresia, and volvulus neonatorum are encountered. Toward the end of life, the physical infirmities of man and cancer of the colon are the important items in the large mortalities observed.

pendicitis in this country 20 years ago. This situation obviously needs study and correction.

Patients coming to the hospital with active hemorrhage because of peptic ulcer should become the primary responsibility of the surgeon. He should decide whether operation is necessary. This decision should no longer be the responsibility of the internist. If hemorrhage has been brisk and if bleeding to shock levels of blood pressure (80 mm. of Hg. or less) has occurred, immediate operation is in order. If there has been hemorrhage without bleeding to shock level, the dripping of skim milk through an inlying gastric tube, the milk being dripped over 24-hour periods, may make an emergency operation unnecessary. Of all substrates with which this Clinic has had some experience in combating the hemorrhage of ulcer, it is my impression that the dripping of skim milk is easily the best. However, in patients who have had more than one hemorrhage, granted the patient is in satisfactory condition, no advantage would appear to be gained through delay. The unfortunate thing is that protracted, conservative treatment of active

hemorrhage provides the surgeon with a patient who is probably a far poorer risk for operation than he was when he first presented himself at the hospital. It is not easy to correct the lag phases in the adjustment of vital processes attending any serious insult, such as hemorrhage. The harm occasioned by the delay is not undone by the simple expedient of blood replacement. The time-loss factor is an item of great importance and must come to be recognized as such. Lost opportunity cannot readily be retrieved.

Perforation—During the past ten years, throughout the country, a great reduction in the mortality due to perforation of an ulcer has taken place. A decade ago, hospital mortalities for perforated ulcer ran from 20 to 25 per cent. Today, those mortalities are quite generally under 10 per cent. In fact, no mortality has been observed attending the closure of perforated peptic ulcers in this Clinic during the past five years.

Casey⁵ found that of the 129 patients dying of peptic ulcer in the State of Minnesota in 1952, perforation caused the deaths of 36, or 28 per cent. Additionally, 7 patients (5.5 per cent) died of perforation and associated hemorrhage. This was an unexpected finding and suggests definitely that perforation continues to constitute a real hazard and one which must be reckoned with in appraising the potential hazards of a peptic ulcer.

In recent years there has been a renewal of interest in the conservative management of perforation with an indwelling duodenal tube, a method which I described in 1935.⁸ That report mentioned four patients with acute perforation with pneumoperitoneum treated by suction. One of these patients, with a very large pneumoperitoneum and a perforation of 28 hours, died. There were four additional patients with a "forme fruste" type of perforation without a demonstrable pneumoperitoneum, all of whom recovered. No antibiotics were then available, and following the death of the patient with the large pneumoperitoneum, the conservative management of acute perforation of peptic ulcer was abandoned. Despite the recent flurry of interest in the conservative management of perforated ulcer in England and in this country, operative closure continues to be the method of choice in this Clinic.

Obstruction—Obstruction occurs usually as a sequel of a duodenal or a pyloric ulcer. Obstruction which fails to relent with the ingestion or intragastric dripping of skim milk suggests that an ulcer crater is present. Repeated episodes of obstruction lead to duodenal narrowing. Obstruction, like perforation, usually brings the patient to the surgeon.

HEMATEMESIS WITHOUT OBVIOUS EVIDENCE OF PEPTIC ULCER AT OPERATION

In 1945, in patients in whom hematemesis had been observed and bleeding was still active but no ulcer found at operation, the writer advised per-

forming the conventional three-quarter gastric resection.⁶ At the time of the report, four such cases were cited. In all save one, a small erosion was found high on the lesser curvature. In the remaining patient, diffuse ulceration of the mucosa was found microscopically. Recurrent hemorrhage has not been observed in any of these patients. In the meanwhile, many more such patients have been subjected to gastric resections with gratifying results. Moreover, the suggestion that gastric resection be performed in patients who have had hematemesis, but in whom no ulcer can be found at operation, has been adopted by others.⁷

In such patients, it has become regular practice to measure the portal venous pressure at operation to make certain that one is not dealing with portal hypertension. It has become evident too that, in the bleeding of portal hypertension, excision of the entire acid-secreting area of the stomach is mandatory, an anastomosis being made between the distal end of the esophagus and the antrum of the stomach. It is becoming more generally accepted now that the bleeding from esophageal varices is essentially an acid-peptic linked phenomenon. Moreover, it is probably safe to suggest that hematemesis is almost invariably, if not always, an occurrence related to the erosive effect of acid-peptic juice. Inasmuch as the vagi nerves are divided in this maneuver, obviously a concomitant Heineke-Mikulicz pyloroplasty must also be done.

THE PROBLEM OF GASTRIC ULCER

The garden variety of benign gastric ulcer usually can be identified as such by a competent roentgenologist. Complete healing of the defect attending the ingestion of a Sippy milk diet for a period of two or three weeks, when well controlled roentgenographically, is a safe procedure in most acute gastric ulcers. However, failure of the defect to heal completely is an indication that operation is in order.

There are, however, peptic ulcers which cannot be differentiated from cancer. Eckström⁹ (1952) reports that 11.6 per cent of gastric cancers observed in his clinic in Linköping, Sweden, developed on the basis of a preexisting gastric ulcer. A more aggressive attitude by surgeons in the management of the gastric ulcer problem is therefore very much in order. Moreover, the very circumstance that gastric ulcer is frequently recurrent at the very same site suggests that the gastric mucosa may not have regenerated completely over the defect.

Approximately five years ago, a number of my surgical colleagues in this Clinic followed 13 patients with gastric ulcer to "complete healing" under carefully controlled medical management. At that time, with the patients' consent, gastric resection was undertaken with a view to studying the situation microscopically. Interestingly enough, one of these ulcers which appeared to have healed

completely under roentgen control was a cancer. Of the remaining 12, only one showed perfect healing of the defect in the mucosa. In the remaining eleven, there were peninsulas of mucosa going out from the edges of a tiny residual defect, the center of which was not covered by gastric mucosa. Inasmuch as the mucosa was absent over a portion of the former ulcer, it is quite obvious that the nidus for a new ulcer still existed despite the apparent filling in of the old one.¹⁰

That gastric resection more readily thwarts the peptic ulcer diathesis in the stomach than in the duodenum, every surgeon knows. It is not without interest in this connection that the vital statistics of the United States for the year 1950 show a 25 per cent greater death rate from gastric ulcer than from duodenal ulcer—and this despite the well-known greater frequency of the duodenal.¹¹ In many patients with gastric ulcer, the mucosa in the acid-secreting area of the stomach is thin. In patients with duodenal ulcer, on the contrary, a more usual observation is that the acid-secreting mucosa is relatively thick and heavy. A few well authenticated cases of gastric ulcer and/or erosion have been described in patients who are achlorhydric.¹² The nature of these erosions remains obscure. In any case, abnormally high volumes and values for gastric acidity are by no means a *sine qua non* for gastric ulcer. These occurrences suggest that other ("trophic" and unknown) causes play a more important role in the genesis of gastric ulcer than in duodenal and esophageal ulcer.

Dietary Considerations—A smooth, bland diet, with milk as its base, is undoubtedly the best dietetic regimen for the patient with peptic ulcer. It is to be remembered that it is the protein in the milk which decreases the acidity of the gastric juice. Patients who are above their optimal weight would do well to substitute skim milk for whole milk. Moreover, skim milk is a more effective agent in the control of acidity because the patient will ingest more of it than of whole milk.

Alcohol, coffee (or caffeine in any other form) and tobacco are taboo for the peptic ulcer patient who is trying to control his disorder by dietary methods. Although antacids and depressants of gastric secretion, like Banthine, often afford fairly direct symptomatic relief, my experience has been that the relief in most instances wears out and the patients come seeking the more durable satisfaction of an adequate operation.

PHARMACOLOGIC CONTROL

Dr. J. B. Kirsner,¹⁴ well-known Chicago gastroenterologist, has indicated that his experience has been better with Pamine (Probanthine) than with Banthine and atropine. Time has shown that Banthine has not proved the panacea for peptic ulcer that its devotees once prophesied it would become. It is pertinent to this discussion to point out that Whitrock, Hansen and Chenoweth¹⁵ (1954) ob-

served that the administration of Banthine suppressed pancreatic secretion more than it did gastric secretion, resulting in an excess of bile, HCl and pepsin. They would control this unwelcome situation by the administration of antacids. All this obviously points up the inadequacy of drug therapy in the management of peptic ulcer.

OPERATIONS FOR THE RELIEF OF PEPTIC ULCER

Gastric Resection—A number of operations appear to afford satisfactory protection against recurrent ulcer. During the past decade, standardization of the extent of excision of gastric tissue in Billroth I and II operations has come about. The incidence of recurrence after well-performed operations is approximately one per cent. The majority of surgeons who have had a large experience in the surgical management of peptic ulcer have come to appreciate that it is not necessary to excise the ulcer to allay the peptic ulcer diathesis. The complaint of patients and surgeons, however, concerning these procedures has been that too frequently the operation, whether performed on the Billroth I or II plan, is accompanied by a group of symptoms commonly lumped together as the "dumping syndrome." Loss of weight is observed quite regularly; and sweating, palpitation and tachycardia, accompanied by the desire to lie down, attend the ingestion of food. Persistence of these symptoms, in some degree, is noted in approximately 20 per cent of patients undergoing the Billroth II type of resection, and in about two per cent of patients, these symptoms appear to be disabling.

Vagotomy—Gastrojejunostomy and pyloroplasty have proved to be unsatisfactory operations for the relief of peptic ulcer.

During the past decade there has been considerable renewal of interest in vagotomy as an operative procedure for peptic ulcer. Dragstedt and his associates¹⁶ (1951), who have made important contributions to our knowledge concerning gastric secretion in man, have insisted on the completeness of vagotomy as an essential feature of a successful operation. Today, however, very few surgeons perform vagotomy as an isolated primary operative procedure. Some add a drainage operation such as gastrojejunostomy; others remove the antrum as well. Some surgeons hold to the principle of gastric resection, but feel that the protection afforded by a concomitant vagotomy is such that a lesser resection will suffice. In other words, a 50 per cent gastric resection with an added vagotomy has been substituted for a 75 per cent gastric resection. Whether such a resection will ultimately afford the promise of the conventional three-quarter Billroth operation remains to be observed.

It needs to be said in this connection that surgeons, like me, who affect a special interest in the peptic ulcer problem see a few patients each year who, successively, have had gastrojejunostomy,

vagotomy, and gastric resection, followed in turn by an additional gastric resection or two—the patient still continuing to have a persistent peptic ulcer. I have had several skirmishes with patients who have had such a succession of operations. The interesting finding at a fifth or a sixth operation is that invariably there is still a good deal of residual stomach. In the beginning, such patients have usually been hypersthenic—possessed of the drayman type of constitution. The extrapleural sternal splitting incision (Fig. 3), which affords an excellent approach to the attic of the abdomen, makes it possible to view with care the nature of the attachment of the fundic end of the stomach to adjacent viscera. Patients have come to me with the statement that they have been advised to have a total gastrectomy, but I have not found it necessary to resort to this expedient. Ordinarily, 90 to 100 gm. of stomach are still available for excision in a fifth or sixth operation, leaving on completion of the anastomosis a residual gastric fragment constituting approximately 10 per cent of a normal-sized stomach. I have yet to see a recurrence following this type of operative correction—a procedure which has been carried out on a fairly large number of patients who have had multiple antecedent operations for peptic ulcer over the last 15 years.

In other words, whereas vagotomy and antral excision for the relief of peptic ulcer, appear to be physiologically sound operations, situations like those just alluded to make one cautious in accepting the belief that antral excision plus vagotomy is adequate to thwart the ulcer diathesis.

In the dog, vagotomy offers considerable protection against the ulcerogenic effect of the histamine-beeswax preparation. Yet, when a drainage operation, such as a concomitant gastrojejunostomy or antral excision is done, the vagotomy appears to have lost a great deal of its protective action.¹⁷

Today there would appear to be considerably less interest in vagotomy in the management of peptic ulcer than there was five years ago. Moore,¹⁸ of the Massachusetts General Hospital, an erstwhile keen proponent of the procedure, has virtually abandoned vagotomy as a primary operation for duodenal ulcer. The recurrence rate at the Albert Billings Hospital in Chicago following vagotomy and gastrojejunostomy, according to Allen¹⁹ (1954), is six per cent—an occurrence which will not afford much solace to sufferers from peptic ulcer who want to obtain life insurance policies. The ulcer-thwarting effect of an acceptable gastric resection, on the contrary, has been so reassuring that, after five years following gastric resection for peptic ulcer some insurance companies in this area have been accepting our patients as standard risks.

Segmental Gastric Resection²⁰—This Clinic has had a satisfactory experience with the employment of segmental gastric resection in the management of duodenal ulcer. The procedure also is

adaptable to benign gastric ulcers not located in the antrum. Inasmuch as transverse division of the stomach vagotomizes the antrum, the routine performance of complemental pyloroplasty to insure satisfactory emptying is essential.

No recurrences of ulcer have been observed in approximately 100 patients subjected to segmental gastric resection in this Clinic. However, the incidence of the "dumping syndrome" has been sufficiently great to suggest that this procedure, though probably superior to the Billroth operations, is not an ideal operation for peptic ulcer. Achlorhydria is observed rather frequently following segmental resection.

Tubular Gastric Resection²¹—Enough experience has now been had with this operative procedure to indicate that it appears to be an eminently satisfactory operation for duodenal ulcer. Obviously, inasmuch as the entire lesser curvature of the stomach remains, this operation has no application in the management of gastric ulcer.

This operation has the advantage over segmental gastric resection in that since the lesser curvature remains intact, no portion of the stomach is vagotomized. In consequence, it is not necessary to perform a complemental Heineke-Mikulicz pyloroplasty (Fig. 4), save in the presence of active bleeding, or in the presence of some degree of obstruction occasioned by an indurated duodenum.

The Heineke-Mikulicz pyloroplasty, whether done in segmental resection or in tubular gastric resection, circumvents the difficult problems of the large supraduodenal ulcer crater. In consequence, the surgeon can make a long longitudinal opening, with relative equanimity, cutting across the anterior portion of the pyloric muscle. An excellent view of the lower antrum and the first portions of the duodenum is provided. Surgeons in our Clinic have learned a great deal concerning the appearance of ulcer through the simple expedient of opening the duodenum. Pontifical statements made by well-known gastric surgeons that pyloric ulcers do not exist can be shown to be without meaning when the antrum and duodenum are inspected through a pylorotomy incision.

Tubular resection with a concomitant pyloroplasty has simplified the problem of dealing with brisk hemorrhage from an actively bleeding duodenal ulcer at operation. The technique of the operation of tubular gastric resection is shown in the accompanying diagrams (Fig. 4).

Symptoms of the "dumping syndrome" are observed less frequently after this operation than following any of the other resection techniques. Achlorhydria after histamine stimulation does not occur as frequently as after segmental resection. The volumes of gastric juice, however, regularly are quite small. MacLean²² (1954) finds that patients having had tubular resections absorb 95 per cent of the ingested fats. This observation indicates quite definitely that weight loss is owing

TECHNIC OF STERNOTOMY



Fig. 3. The Extrapleural Sternotomy Incision: (a) The incision. (b) The finger is inserted beneath the ensiform, preparatory to the insertion of the Lebsche sternal knife. (c) The Lebsche sternal knife. The knife is driven with an ordinary orthopedic hammer. (d) The left margin of the divided sternum is retracted laterally. The knife is shown cutting the diaphragm downward. The incision in the diaphragm extends to the point at which the pericardium comes directly into view. It is obvious that a deliberate opening of the pericardium will permit even easier retraction of the rib margin on the left side. (e) The exposure obtained with the sternotomy incision. The whole attic of the upper left abdomen comes immediately into view. The avascular ligament of the left lobe of the liver has been divided and the liver has been retracted to the right. It is obvious that this incision affords excellent exposure for repair of paraesophageal hernia as well as for total gastrectomy, in which procedure excision of several centimeters of esophagus is to be performed. Moreover, sternotomy is very helpful in the conventional sub-total gastric resection and is employed routinely in this Clinic in that operation. (f) Rewiring of the sternum. Ordinarily, two No. 24 stainless steel wires suffice. The hand-driven awl with a short side arm for engaging and pulling the wire through is shown. (g) The sternum is re-wired. The mid-line incision in the abdominal wall is closed in the conventional manner with two rows of interrupted silk.

essentially to diminished intake of food. It is to be remembered too that an ulcer regimen is a fattening diet, and that following operation, patients are inclined to veer away from the high-caloric diet generally prescribed for patients with peptic ulcer.

The Ulcer Potentiating Influence of Antral Exclusion—Surgeons have known for long years that antral exclusion favors ulcer recurrence after gastric resections that are otherwise satisfactory. The manner in which antral exclusion favors the development of stomal ulcer is not known. Koennecke²³ (1922) was the first to demonstrate experimentally in the dog that placement of the antrum upon the distal third of the ileum led to the formation of stomal, peptic ulcer at the new

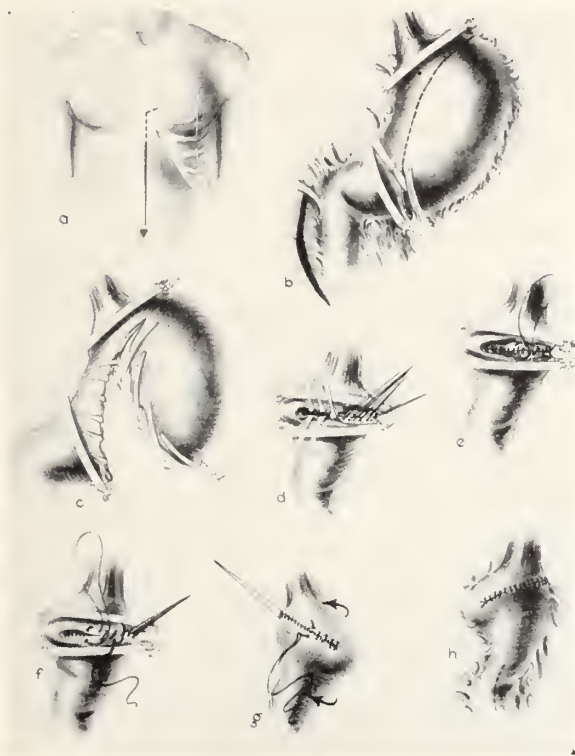
TUBULAR RESECTION WITH TRANSVERSE
GASTROPLASTY

Fig. 4. Tubular Resection: This is the operation currently employed in this Clinic for duodenal ulcer. Obviously it is not applicable to gastric ulcer. The extent of the excision in the acid-secreting area is not quite as large as that in segmental resection. A comparison of illustrations (b) and (c) will suggest that in tubular resection (c) a short segment of acid-secreting mucosa is left along the lesser curvature, whereas it is removed in segmental resection. The vagi are not divided in this procedure. Consequently a pylorotomy is necessary only in instances when there is narrowing of the duodenum or in the presence of massive hemorrhage from the duodenum.

Both segmental and tubular resection have been employed with satisfaction in the "idiopathic" strictures of acid-peptic ulcer. Inasmuch as free gastric drainage is so important in the relief of acid-peptic strictures of the esophagus, a Heineke-Mikulicz pyloroplasty is added, even though pyloric obstruction is not present.

Tubular resection has proved eminently satisfactory in the management of duodenal ulcer. Tubular resection protects against the histamine-in-beeswax provoked ulcer in the dog.

gastric outlet. Smidt²⁴ (1923) demonstrated that a Billroth II type of gastric resection accompanied by antral exclusion in the dog led regularly to large increases in the volume of gastric secretion from isolated gastric pouches following a meat meal; there was also a constant but slight increase in the acidity of the gastric juice from such isolated pouches under these conditions. Following the feeding of bread or milk, the augmentation of secretion was considerably less under similar conditions. Enderlen and his associates²⁵ (1923) also noted that dogs with antral exclusion had augmented secretion from isolated gastric pouches, despite concomitant extensive gastric resection. It remained for Dragstedt²⁶ and his associates to lend important objective evidence to substantiate these earlier observations, attesting the ulcer-provoking

tendency of antral exclusion. Dragstedt rightfully points out that transference of the antrum to the colon results in "hyperfunction" of the antrum. Stomal ulcer and great augmentation of gastric secretion from isolated gastric pouches were regular accompaniments. It may definitely be said therefore that antral exclusion, even when accompanied by an extensive gastric resection, constitutes an unacceptable surgical treatment for ulcer.

Antral Retention Is Not Synonymous With Antral Exclusion or Migration—It is well known that excision of the antrum diminishes gastric secretion. Also, the success of the segmental and tubular resections suggests definitely that retaining the antrum is not synonymous with antral exclusion. Kelly, Cross and I²⁷ (1954) observed that antral exclusion in the dog resulted in stomal ulcer in 47 per cent of instances; when a simultaneous 80 per cent gastric resection was done, the incidence of stomal ulcer was still 42 per cent. On the contrary, excision of the pylorus, with reconstruction of the gastrointestinal continuity on the Billroth II principle, was unattended by stomal ulcer. These findings speak forcibly for the important difference between antral retention and antral exclusion. I took this position three years ago in a discussion which followed my presentation of segmental resection, when it was suggested that such a procedure was an unphysiologic operation for peptic ulcer because the antrum was retained. As long as the antrum retains its normal pattern of continuity with the acid-secreting portion of the stomach, the antrum does not potentiate the ulcer diathesis.

THE ROLE OF THE DUODENUM

Recent experiments in our laboratory suggest that the duodenum may play an important role in depressing gastric secretion. When the duodenum is excised, stomal ulcer occurs. Mann and Kawamura²⁸ observed this occurrence in 1922. Studies on dogs with isolated gastric pouches (Brackney²⁹ et al., 1954) indicate that excision of the duodenum leads to large increases in volume and in gastric acidity. Transference of the duodenum to the mid-jejunum, when the bile and pancreatic ducts are left near the new gastric outlet, is followed by similar evidences of hypersecretion from isolated gastric pouches.

These observations, together with those reported above under antral exclusion, as well as the ulcer-thwarting effectiveness of segmental and tubular resection, bespeak the advantage, in gastric resection, of having the gastric juice from the residual gastric pouch enter the intestinal canal over the mucosa of the duodenum.

SUMMARY

Peptic ulcer is still a challenging problem. Whereas there has been a very significant overall reduction in the mortality of acute appendicitis and bowel obstruction during the past two decades,

no such reduction in the mortality of peptic ulcer has come about. This circumstance is owing largely to deaths occurring through the agency of hemorrhage. Inasmuch as satisfactory operations are now available which thwart the ulcer diathesis in an effective and lasting manner, there would appear to be no good reason to withhold operation from patients who have had more than one episode of hematemesis from peptic ulcer. When the medical profession learns to manage the threat of hemorrhage from peptic ulcer satisfactorily, the mortality of the disorder largely will have disappeared.

During the past decade, the medical profession has learned how to control the serious threat of perforation. Through the agency of improved surgical care, including employment of antibiotics and a better toilet of the peritoneal cavity at the time of the closure of the perforation, the mortality of perforation is no longer so serious as it was a decade ago. In fact a number of surgeons, in selected patients, are carrying out gastric resection at the time when the perforation is dealt with.

The gastric ulcer constitutes a special problem. The hazard of confusing a benign gastric ulcer with cancer is real. Inasmuch as gastric ulcers frequently recur at the very same site, despite apparent satisfactory healing attending medical management, earlier and more frequent recourse to operation is in order.

Satisfactory operations which allay the ulcer diathesis are available. Moreover, in this area alone a large number of patients who have been subjected to a satisfactory operation for ulcer have been taken on as standard risks by insurance companies after the lapse of five years following operation, no recurrence having been observed meanwhile. When it is recalled that patients with peptic ulcer are not insurable, this very circumstance speaks eloquently for the faith actuaries have in the protection which an acceptable operation provides against ulcer recurrence. When patients with recurrent gastric hemorrhage are urged to accept the protection of operation, the mortality of peptic ulcer, like that of appendicitis and bowel obstruction, will begin to exhibit definite evidence of betterment.

Tubular gastric resection appears to be an eminently satisfactory operation for peptic ulcer. It protects against the histamine-in-beeswax provoked ulcer in dogs. This operative procedure, carried out through an extrapleural sternal-splitting operation, is essentially a simple operation. It is to be remembered that it is *antral exclusion* and *not retention* of the antrum which abets the ulcer diathesis. Were this not true, every man retaining his antrum would be a potential candidate for the occurrence of peptic ulcer. It is my feeling that as long as the antrum is *in contact* with the residual gastric pouch, retention of the antrum does not abet the ulcer diathesis. Our observations to date

on these patients suggest that, from the patient's point of view, tubular resection is probably the most acceptable type of gastric resection for peptic ulcer.

Evidence indicates that gastric resection techniques which restore the normal pattern of the gastric emptying of the secretion of the residual gastric pouch into the intestinal canal have definite physiologic advantages over the Billroth II type of operation. Technical difficulties with many duodenal ulcers suggest that acceptance of only segmental and tubular types of resection will circumvent those difficulties and provide a normal path of gastric emptying over the duodenal mucosa.

The etiology of peptic ulcer still remains in part an enigma. The corrosive effect of acid-peptic juice is the most important single agent. However, a large number of items, such as fatigue, spasm of the blood vessels of the mucosae over which the acid-peptic juice may play, blood loss and other stress factors, abet the ulcer diathesis and yet fail to augment gastric secretion.

Of all the juxtagastric segments of the alimentary tract, the mucosa of the esophagus appears to be the most sensitive to injury by acid-peptic juice. In fact, it appears certain that esophageal peptic ulcer occurs far more commonly than has been generally believed. In fact, it may safely be said that every "idiopathic" stricture of the esophagus is acid-peptic ulcer of the esophagus. Similarly, it would appear that "spontaneous perforation" of the esophagus is acid-peptic perforation of the esophagus.

Patients who get along well on medical management without any complication are not candidates for surgery. The patient to whom the monotony of the ulcer diet does not appeal, the patient who is never wholly free from pain for a considerable length of time, the patient with recurrent gastric hemorrhage, and the patient with periodic episodes of obstruction all should be advised to have operation for the relief of peptic ulcer.

The key to reduction of the prohibitively large mortality from peptic ulcer which exists today in patients between the ages of 40 and 70, is readier recourse to operation in patients who have persistent difficulty. And in patients who have suffered hemorrhage, such occurrences must come to be recognized as synonymous with failure of adequate control by conservative means. Only when hemorrhage comes to be viewed as an indication for operation, will the reproach of the present large mortality from peptic ulcer in the mature years of life become replaced by a record of objective accomplishment. The grave hazard of hemorrhage must come to be viewed with serious concern by every physician who affects an interest in this problem. Moreover, patients with ulcer, and the general public as well, should come to know that hemorrhage is the most important single cause of death from peptic ulcer.

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SUI POSTGRADUATE CONFERENCE

Remediable Diseases of Infancy and Childhood

UNIVERSITY HOSPITALS, IOWA CITY

FRIDAY, OCTOBER 1, 1954

- | | | |
|--------------------------|-------------|--|
| | 8:30 | Registration (Fee: \$15) |
| | 8:50 | Conference Orientation |
| | 9:00—10:30 | |
| DEAN M. LIERLE, M.D. | | Harelip and Cleft Palate |
| J. L. EHRENHAFT, M.D. | | Esophageal Atresia and Tracheoesophageal Fistula |
| ROBERT T. HOSIE, M.D. | | Hypertrophic Pyloric Stenosis |
| | | <i>Discussion</i> |
| ROBERT T. TIDRICK, M.D. | | Biliary Atresia and Fibrocystic Pancreatic Disease |
| E. S. BRINTNALL, M.D. | | Errors of Intestinal Development, Rotation and Omphalocele |
| | 10:30—11:00 | |
| | | <i>Discussion</i> |
| | 11:00—12:00 | |
| CHARLES D. MAY, M.D. | | Water Balance in Childhood, the General Problem |
| EDWARD E. MASON, M.D. | | Fluid, Blood and Electrolyte Replacement in the Surgery of Infancy and Childhood |
| RAYMOND G. BUNGE, M.D. | | Endocrine Disturbances in Childhood Amenable to Surgery |
| | 12:00—12:30 | |
| | | <i>Discussion</i> |
| | | <i>Lunch Period</i> |
| | 1:30—2:30 | |
| ROBERT W. NEWMAN, M.D. | | Common Childhood Disorder of the Feet |
| IGNACIO V. PONSETI, M.D. | | Juvenile Scoliosis and Epiphysitis |
| CARROLL B. LARSON, M.D. | | Juvenile Diseases of the Hip |
| | 2:30—3:00 | |
| | | <i>Discussion</i> |
| | 3:00—4:00 | |
| GEORGE PERRET, M.D. | | Hydrocephalus and Spina Bifida |
| RUSSELL MEYERS, M.D. | | Abnormalities of Motor Function in Childhood |
| RUBIN FLOCKS, M.D. | | Congenital Obstructions of the Urinary Tract |
| | 6:00—8:00 | |
| | | <i>Dinner</i> |

SATURDAY, OCTOBER 2, 1954

- | | | |
|-------------------------|-------------|--|
| | 8:30 | Registration |
| | 8:45—9:30 | |
| EUGENE VAN EPPS, M.D. | | Diagnosis of Congenital Cyanotic Heart Disease |
| J. L. EHRENHAFT, M.D. | | Treatment of Cyanotic Heart Disease |
| | | <i>Discussion</i> |
| | 9:30—10:15 | |
| RODMAN E. TABER, M.D. | | Funnel Chest (pectus excavatum) |
| SAM H. WALKER, M.D. | | Bronchiectasis in Childhood |
| | | <i>Discussion</i> |
| | 10:15—10:15 | |
| SIDNEY E. ZIFFREN, M.D. | | Herniae in Children |
| JOHN A. GIUS, M.D. | | Acute Intra-abdominal Childhood Emergencies |
| ROBERT C. HICKEY, M.D. | | Imperforate Anus |
| | | <i>Discussion</i> |
| | 1:30 | |
| | | Montana State University Football Game |

Basic Considerations in the Management of Renal Disease

HOWARD M. ODEL, M.D.,*

ROCHESTER, MINNESOTA

THE PHYSICIAN WHO concerns himself with renal disease soon discovers that his field embraces not one, but a large assemblage of diseases. Attempts to categorize these diseases completely have invariably resulted in detailed and sometimes complicated classifications. In fact, the very complexity of these classifications has often led to confusion in the evaluation and treatment of renal disease, for, what may be required by the specialist in the field of renal disease may not be practical or expedient for the physician whose practice necessitates his being familiar with the entire range of clinical medicine. Therefore, rather than present a classification and thus confuse a discussion of treatment, which has been termed the most practical branch of medicine, I propose to consider the management of four fundamental clinical manifestations of renal disease. These are anemia, edema, renal insufficiency and hypertension. Regardless of the specific etiologic factor producing it, or the pathogenesis of the lesion in the vasculorenal system, the overt clinical expression of renal disease, in most cases, will include one or more of these four conditions.

ANEMIA

Anemia associated with renal disease has long been recognized; in fact, the severity of the anemia may be a useful index to the degree of azotemia or nitrogen retention, for anemia develops only in association with progressive failure of renal function. The anemia of renal disease usually is normochromic and normocytic, with an almost parallel degree of reduction in hemoglobin and erythrocytes. In the past, hematuria was thought to be a factor, but it has been shown repeatedly that the degrees of hematuria and anemia are not related. Others have expressed the opinion that a hemolytic process may be present and that the anemia is secondary to rapid destruction of blood. Extensive studies, however, have yielded no demonstrable evidence of excessive hemolysis. Protein deficiency, likewise, has been incriminated as a causative factor. However, in cases in which hypoproteinemia and hyperproteinuria occur, namely in cases of nephrosis, anemia is rarely seen. As a result of recent extensive studies of the bone mar-

row of patients suffering from the anemia of renal disease, the anemia of renal insufficiency is thought at present to be due to the toxic inhibitory effect of retained urinary toxins on the bone marrow. The result is hypoplastic marrow and anemia proportional to the degree of azotemia present.

The treatment of the anemia which occurs in severe renal disease is difficult. Various preparations of iron, preparations of liver, vitamin B₁₂ and folic acid, even in large doses, have all proved ineffective in increasing the concentration of the hemoglobin or the number of erythrocytes in the circulating blood. Transfusion of whole blood or the administration of washed erythrocytes resuspended in a physiologic solution of sodium chloride appears at present to be the only satisfactory method of restoring the blood picture to approximately normal levels. Because the anemia of renal disease is stubborn, multiple transfusions may be indicated. Patients with severe renal disease are more likely to have post-transfusion reactions than are persons with normal kidneys. It has therefore been our practice, at the Mayo Clinic, always to use crossmatched blood for such patients and to use frequent small transfusions of 150 to 175 ml. of blood cautiously, rather than 500 ml. at less frequent intervals.

EDEMA

In the absence of cardiac failure, the presence of edema in a patient suffering from chronic renal disease is the clinical sign of metabolic derangement of the body processes which has been designated the "nephrotic syndrome." Although, for the most part, the specific cause and pathogenesis of the nephrotic state remain a mystery, the initiating factor in its development has been presumed to be loss of excessive amounts of protein (particularly albumin) in the urine. The proteinuria itself is believed to result primarily from increased permeability of the filtering surface of the glomerular membranes permitting molecules of normally retained plasma protein to pass into the urine. As a result of excessive loss of protein, hypoproteinemia associated with disturbance of the osmotic equilibrium between blood and tissue fluids develops. Increased amounts of fluid then accumulate in tissue spaces. Elevation in the lipid content of the blood, sometimes with astonishingly high levels for the various lipid fractions, is frequently seen

* Section of Medicine, Mayo Clinic and Mayo Foundation. The Mayo Foundation is a part of the Graduate School of the University of Minnesota.

and is thought by some investigators to be a compensatory reaction directed toward restoration of a more nearly normal osmotic relationship. Depression of the basal metabolic rate is likewise frequently observed, sometimes to extremely low levels. Although an exact explanation for this is lacking, it is thought to be related to interference by edema fluid with normal oxygen exchange in the tissues.

The prevailing opinion is that the diet for patients suffering from nephrotic edema should be high in protein, with an intake of 100 to 125 gm. daily, in an attempt to replace depleted plasma proteins and thereby to increase the colloidal osmotic pressure of the blood. It should be emphasized, however, that, unless protein deprivation is an additional factor, high protein diets do not appear to exert any immediately evident effect on the level of plasma proteins. If, in addition to hypoproteinemic edema, renal insufficiency and nitrogen retention are present, the daily protein content of the diet should be restricted to 50 to 75 gm. Of major importance in the diets for nephrotic patients is the restriction of salt. For the occasional patient, qualitative restriction of salt may be adequate. For the majority of patients, however, it is necessary to reduce the amount of sodium in the diet to as near 0.5 gm. as possible. To accomplish this, it is necessary that all food be prepared without salt, that the patient use salt-free butter and salt-free bread, that any foods of high salt content be eliminated from the diet and that the use of baking powder and baking soda be avoided. Toward this end, cation-adsorbing resins may be employed if tolerated by the patient, although evidence at hand is not entirely convincing that with a daily intake of 0.5 gm. of sodium such a resin will adsorb a significant amount of the ion. There is no entirely satisfactory substitute for salt. Several compounds of various salts, devoid of sodium, are available commercially, and are enjoyed by some patients. Generally, however, such compounds do not enhance, but rather detract from the taste of food. For this reason, it seems more advisable for the patient voluntarily to cultivate a taste for a restricted salt diet. Restriction of oral intake of salt-free fluids is not indicated for patients with renal edema; in fact, such patients should be encouraged to take a liberal volume of fluid daily.

In some cases, accumulation of fluid in the serous cavities, pleurae, pericardium or peritoneum may be sufficiently great to produce symptoms or interfere seriously with adequate function of vital organs. In such cases, mechanical removal of the fluid by paracentesis may be indicated. Not infrequently, such a procedure will invoke satisfactory diuresis, with diminution of peripheral edema, in a patient whose edema heretofore had been refractory to management. The mechanical drainage of peripheral edema fluid by insertion of needles

or cannulas into subcutaneous tissues of extremities or genitalia, first advocated years ago by Southey, should be strongly discouraged.

Induced diaphoresis, advocated in years past for the treatment of edema, has been largely abandoned, first because of the debilitating effect on the patient, and second because it rarely has any substantial effect in ridding the tissues of edema fluid. For the same reasons, attempts to produce diuresis and remove edema fluid by purgation have been discarded.

Of the diuretic agents available, so-called acid-salt and mercurial diuretics often are most effective. The former, such as potassium chloride, ammonium chloride and potassium nitrate, are effective diuretics largely because of their ability to produce acidosis and to displace sodium in the organism. The oral administration of one of these agents in doses of 6 to 9 gm. daily usually will result in satisfactory diuresis. Care must be taken, however, when these salts, especially the potassium salts, are used for patients with significant retention of nitrogen, to avoid serious acidosis or potassium intoxication. Mercurial diuretics, such as salyrgan, mercupurin, mercurhydrin and thio-merin, have sometimes been used to advantage in the treatment of massive edema, if renal excretory function is adequate. Many times these drugs act more effectively if used in conjunction with one of the acid-salt diuretics. However, mercurial diuretics should not be used in the presence of impaired renal function as evidenced by significant hematuria or a concentration of blood urea or non-protein nitrogen exceeding 60 mg. per 100 ml., because of the risk of further aggravating the renal lesion.

Hypertonic solutions may be effective also in promoting diuresis. Dextrose in 20 to 25 per cent solution or sucrose in 20 per cent solution has sometimes been used effectively in doses of 250 to 500 ml. on alternate days. If no contraindications exist, diuretic action of one or the other of these solutions may be enhanced by the addition of 1 to 2 ml. of one of the mercurial diuretic agents to the solution.

Plasma volume expanders are of prime importance as diuretics because they increase the colloidal osmotic pressure of hypoproteinemic plasma to as near normal levels as possible. Several compounds suitable for this purpose are available at present. Concentrated human-serum albumin given intravenously in doses of 25 to 100 gm. daily is usually effective, but its high cost and the difficulty of procurement make its use somewhat less than optimal at present. Transfusions of whole blood or blood plasma in units of 500 ml. daily or every other day, in some instances, may be equally effective. Acacia in 6 per cent solution, gelatin in 6 or 10 per cent solution and dextran in 6 or 12 per cent solution in units of 500 ml., administered slowly intravenously on alternate days, although

they have no effect on the level of the serum proteins, are relatively inexpensive and are effective in elevating the colloidal osmotic pressure of the blood serum, with resultant diuresis of water and salt and disappearance of edema. Occasionally anaphylactoid reactions to acacia may occur, accompanied by dyspnea and urticaria. Chemical phlebitis has been observed also as a complication to its administration. However, if such a reaction occurs, prompt cessation of the infusion and subcutaneous administration of 0.6 to 0.9 ml. (10 to 15 minims) of epinephrine will usually alleviate such symptoms. Purified preparations of gelatin and dextran are now obtainable, and although reactions have been noted similar to those occasionally encountered after the administration of acacia, such reactions are rare and should respond to cessation of the infusion and administration of epinephrine. My colleagues and I now believe that gelatin and dextran are preferable to acacia because they are less likely to produce systemic reactions and because, up to the present, there is no evidence of tissue storage.

As mentioned previously, the basal metabolic rate often is depressed to significantly low levels in the presence of the nephrotic syndrome with massive edema. In such cases administration of sufficient desiccated thyroid to elevate the rate to normal or near normal will enhance the program of diuresis, or occasionally will invoke diuresis in a patient hitherto refractory to treatment.

Results from the use of corticotropin and cortisone have been variable. In some patients, particularly those with nitrogen retention or hypertension, renal insufficiency has been aggravated. In other patients, these agents have produced diuresis, and this diuresis usually has occurred after administration of the hormone has been discontinued. The fact must be borne in mind continually that these hormones cause profound effects on the metabolism and electrolyte equilibrium of the organism, and thorough knowledge of these effects is necessary to the safe and intelligent use of these drugs. Nitrogen mustard has been used to invoke diuresis in some nephrotic patients with a measure of success. Although the mode of action of this compound in this disease is not clear, intravenous administration of 0.1 mg. per kilogram of body weight on 2 to 4 successive days often results in a decrease in the amount of protein lost in the urine as well as significant diuresis. This drug must be used cautiously, for severe systemic reactions and critical depression of bone marrow activity have been observed after its administration. Some investigators are of the opinion that administration of corticotropin, cortisone and nitrogen mustard as well as the induction of measles or vaccinia may be followed by modification of the nephrotic state itself; whether, however, the fundamental renal lesion is altered by any of these agents still is open to question.

The edema of acute glomerulonephritis occurs on a different basis from nephrotic edema, and no specific therapy other than restrictions on salt and protein seems indicated for it. It must be emphasized, however, that congestive heart failure with pulmonary congestion and peripheral edema is not an infrequent complication of some renal diseases, particularly acute glomerulonephritis and the chronic nephritides associated with hypertension, and if such a complication supervenes, definitive therapy for acute cardiac failure should be instituted without delay. The administration of oxygen by mask, nasal catheter or tent occupies an important place in combating cyanosis and in relieving severe dyspnea. The cautious intravenous administration of 250 to 500 ml. of a 20 to 25 per cent solution of dextrose, once or twice daily, frequently is helpful in cases of severe congestive heart failure, because of the diuretic effect of this solution and its nutrient effect on the myocardium. Aminophylline, in doses of 0.24 to 0.49 gm. ($3\frac{3}{4}$ to $7\frac{1}{2}$ grains) added to the glucose, may be an important therapeutic adjunct. Venesection, one of the oldest therapeutic procedures in medicine, occupies an important place in the treatment of congestive heart failure, and its intelligent use may be a lifesaving measure, provided the patient does not also have significant anemia. Rapid removal of 300 to 500 ml. of venous blood may permit the heart to keep pace with or even overcome its overload. One of the most important adjuncts to the treatment of this complication is the administration of digitalis. Digitoxin in a total dose of 1.2 mg., given either in a single or, preferably, in divided doses, is the usual digitalizing agent for an adult, and a daily dose of 0.1 to 0.2 mg. administered orally or intravenously should be sufficient for maintenance after digitalization has been accomplished. The maintenance dosage of digitalis should be kept low in patients exhibiting decreased renal function with a low urinary output, and the physician must be on the alert for the signs of digitalis intoxication.

RENAL INSUFFICIENCY

One of the most significant effects which disease produces in the kidney is impairment of function. The presence of latent renal damage is dependent entirely on the large reserve capacity of the normal kidney. Patients who have renal disease with latent damage have no demonstrable reduction in renal function and results of all tests of renal function are within normal range. In the stage of compensated renal insufficiency, a considerable degree of renal reserve has been lost. So long as the patient is in good general health, concentrations of the various nitrogen constituents in the blood remain normal. The ability of the kidney to do a specific amount of work in a limited time, however, is reduced. The power to produce a concentrated or dilute urine is impaired. If an unusual

amount of strain is placed on the organ, a break in compensation may occur. In the presence of decompensated renal insufficiency, the kidney loses not only its functional reserve but also its capacity to care for the current excretory load. The concentrations of nitrogenous constituents and other metabolites in the blood mount steadily, and uremia results, with its characteristic train of symptoms and signs, confusion, restlessness, headache, nausea, vomiting, convulsive seizures and, ultimately, coma.

The primary aims in the treatment of renal insufficiency, whether acute or chronic, are (1) to secure minimal protein catabolism, (2) to maintain adequate fluid balance, with avoidance of overloads but with administration of sufficient fluid to facilitate urinary excretion, and (3) to maintain approximate electrolyte equilibrium.

In the presence of either acute or chronic renal insufficiency, the dietary intake of protein should be restricted to a minimum in order to lessen the excretory load that protein metabolism imposes on the kidneys, and also to prevent increasing azotemia and further renal damage; yet the diet must be sufficiently high in carbohydrate and fat so that the protein-sparing properties of these food-stuffs will prevent the breakdown of endogenous stores of protein and the patient will be kept in positive nitrogen balance. The rice-fruit diet of Kempner, the high carbohydrate, high fat, low protein diet suggested by Borst, and the protein free, high carbohydrate, high fat formula of Bull should be ideally fitted to serve this purpose. Borst has expressed the opinion that, if the patient can be provided a low-protein or protein-free diet which is sufficiently high in carbohydrate and fat to prevent breakdown of endogenous protein, the rate of accumulation of nitrogenous and other waste products in the blood will be materially retarded, and the patient can be maintained in better condition. If the degree of renal insufficiency is mild to moderate, an intake of about 40 gm. of protein daily (approximately 1 gm. of protein per kilogram of body weight) may be adequate. Unfortunately, however, the successful carrying out of a dietary program is difficult for many patients because anorexia, nausea and vomiting prevent adequate oral intake and necessitate parenteral administration of supplemental nutritional substances.

For these reasons, and because of the extreme importance of electrolyte balance and water balance to a patient with renal insufficiency, parenteral administration of fluid becomes one of the major objectives in treatment. Some have advocated use of a 10 or 15 per cent solution of dextrose, made up in distilled water, for the purpose of providing a high caloric intake; yet a hypertonic solution must be used with great caution in order that fluid may not be pulled from extracellular spaces into the circulating blood, with consequent

production of hydremia, which might result in pulmonary edema and congestive heart failure.

The volume of fluid to be given parenterally is of paramount importance, and, many times, on this factor alone will depend the success or failure of treatment. Since the normal person excretes daily 500 to 1,500 ml. of urine, 150 to 250 ml. of water in the stool and 1,000 to 1,500 ml. in vaporization from the skin and lungs, he should require 1,500 to 3,000 ml. of fluid daily in order to maintain adequate fluid balance. If, however, a patient has oliguria or anuria, a smaller daily intake of fluid is required. If the patient has a high temperature or is losing an excessive amount of fluid through perspiration, through a nasal tube, or some other abnormal avenue of escape, he may require a larger volume of fluid. In general, a nearly normal state of hydration can be maintained by daily administration of fluid equal in volume to an estimated insensible loss of 1,000 ml. plus a volume equal to the urinary output.

As long as the concentrations of chloride in the plasma and sodium in the serum remain within normal limits, parenteral administration of sodium chloride should not be necessary, but rather, a 5 per cent solution of dextrose made up in distilled water should be the fluid of choice. An intake of large amounts of salt invites retention of water and the occurrence of edema. However, one must be ever mindful that excessive loss of salt in patients with renal insufficiency may occur from vomiting, gastric aspiration, or diarrhea; sodium or chloride may be depleted, and replacement of these ions by parenteral administration of physiologic saline solution may be necessary.

When acidosis is present, sodium bicarbonate may be administered orally, or it may be necessary to introduce solutions of sodium bicarbonate or sodium lactate intravenously. Sodium bicarbonate may be given in a 5 per cent solution intravenously in volumes of 250 to 500 ml. Sodium lactate in sixth-molar concentration likewise may be used for this purpose, in volumes of 500 to 1,000 ml. daily.

Hypocalcemia as a complication of severe renal insufficiency is best treated by the intravenous administration of calcium gluconate in doses of 20 to 40 ml. daily. Aluminum hydroxide by mouth has been used in conjunction with this salt for its effect in removing phosphate. Hyperkalemia, as determined by the appearance of high-peaked T waves, prolonged Q-R intervals and loss of P waves in the electrocardiogram, and by elevated values for potassium in the serum, may occur as a complication of severe renal insufficiency and may be one of the important causes of death in such cases. Acute retention of potassium may be treated successfully by intravenous infusions of 5 per cent dextrose in an isotonic solution of sodium chloride, and, in some instances, the addition of calcium gluconate to the infusion (10 ml. of a 10 per cent solution) may be indicated. For patients suffering

from chronic hyperkalemia, in addition to these measures it is advisable to restrict the intake of potassium and to employ, by either oral or rectal administration, a cation-exchange resin in the hydrogen cycle.

HYPERTENSION

During the course of chronic renal disease, hypertension may appear as a symptom, and except for the fact that the history, symptoms or findings of chronic renal disease antedate the onset of hypertension, the clinical picture may be indistinguishable from that of essential hypertension, in either the benign or malignant phase. While the onset of hypertensive vascular disease in the course of chronic renal disease is of serious prognostic import, the outcome is not necessarily hopeless. Much depends on the severity of the vascular lesion and the state of renal function. If the patient has latent renal damage, or compensated renal insufficiency, then therapy directed toward amelioration of the hypertension may be helpful. The advent of some of the newer antihypertensive drugs gives new hope for some patients in this category. Rauwolfia serpentina in one of its various forms may be effective in controlling mild benign hypertension in some cases, and it may help relieve some of the distressing symptoms, such as headache and vertigo. Hydralazine likewise may be effective. However, this drug, a more powerful antihypertensive agent than Rauwolfia, not infrequently is associated with rather unpleasant early side effects and requires more careful adjustment of dosage. Fortunately, physiologically, hydralazine has been shown to increase renal blood flow, and consequently its effect on the kidney is not likely to be deleterious unless renal insufficiency is far advanced. Hexamethonium and pentamethonium compounds should be used cautiously or not at all in the treatment of hypertension secondary to renal disease. Precipitous falls in systemic blood pressure may decrease renal blood flow and glomerular filtration to a degree sufficient to aggravate renal insufficiency. Thus if any of the antihypertensive drugs are employed, renal function should be observed closely, and if signs of progressive renal insufficiency develop, antihypertensive therapy should be interrupted. Experience has shown that the hypertension of chronic renal disease may be lowered by sympathetic gangliectomy provided renal function is adequate. Such treatment, in some cases has resulted not only in reduction of the hypertension and amelioration of hypertensive symptoms, but also has led to improvement in renal function due to reduction in blood pressure levels, vasodilatation of the renal vessels, and increased renal blood flow.

COMMENT

It is evident from the foregoing remarks, that in discussing renal disease, we have been speaking

of a group of conditions for which no specific therapy has yet been discovered. However, experience has shown that the use of these measures often has aided in making patients more comfortable and in prolonging their lives.

As Robert Hutchison has said, "It is written that there 'abideth Faith, Hope, Charity,' these three, but the greatest of these is Charity.' And so in medicine we have Diagnosis, which is a matter of faith; Prognosis, which is a question of hope; and Treatment, which is only too often an affair of charity. . . . If Diagnosis demands judgment and Prognosis experience, Treatment requires chiefly patience and resource. . . . From the point of view of the sufferer it is also the most important part of the medical art, for it is to treatment of the case that everything else leads up."³

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POSTGRADUATE COURSE OFFERINGS AT SUI

In addition to the short course on "Remediable Defects of Infancy and Childhood, on October 1 and 2, a detailed program for which is to be found on page 373 of this issue of the *JOURNAL*, the College of Medicine at SUI is to present five others during the remaining months in this calendar year:

"*Trauma and Fractures*" September 10 and 11, 1954. Registration fee \$15. Papers by members of the Departments of Surgery and Orthopedics, an open forum and a dinner meeting.

"*Pediatrics*" September 22 and 23, 1954. Registration fee \$15. Lectures, a symposium, and round-table discussions given or under the direction of members of the Pediatrics Department.

"*Physiology and Pathology of the Eye*" September 24 and 25, 1954. Registration fee \$75. Internationally famous ophthalmologists from Sweden, England, Holland, Germany and Italy will present a variety of subjects (cornea, lens metabolism, diabetes and the eye, periarthritis nodosa, new techniques of fundus examination, optomotor reflexes, electoretinography, etc.), and the discussions of them will be led by three visiting American ophthalmologists and by members of the S.U.I. Department of Ophthalmology.

"*Obstetrics and Gynecology*" October 29 and 30, 1954. Registration fee \$15. Meetings are to be in conjunction with the annual sessions of the Iowa Obstetrical and Gynecological Society. There are to be two guest speakers, plus members of the Society and of the staff of the S.U.I. Department of Obstetrics and Gynecology.

"*Dermatology and Syphilology*" November 12, 1954. Registration fee \$10. The session will deal with principles of examination and diagnosis of elementary lesions and patterns of skin disease, case demonstrations and discussions. Recent advances in dermatologic therapy will be stressed.

Factors in the Causation of Recognizable Poliomyelitis

FRANKLIN H. TOP, M.D.*

IOWA CITY

POLIOMYELITIS IS A worldwide natural infection of man which sometime in life affects nearly everyone; in fact, many persons are attacked several times. The disease is present in a recognizable form only occasionally, and still less frequently causes paralysis and death. Present estimates of the ratio of recognized to unrecognized infection varies between 1:100 to 1:1,000 in a year when poliomyelitis is very prevalent. Among recognizable or apparent cases, the proportion with paralysis varies from one outbreak to another with extremes of 30 to 70 per cent, but over a period of years will average roughly at 50 per cent. The fatality rate does not show such wide variations and is found to be in the neighborhood of 5 to 10 per cent. Considering the reported incidence of the disease, 70 cases of detectable poliomyelitis may be anticipated annually in the United States for each 100,000 of the population, and any particular community may be very wide of this mark either upward or downward. This rate is less than one reported case per 1,000 of the population. Thus, it will be noted that poliomyelitis is a predominantly subclinical infection, in which paralysis and death are exceptional events.

Infrequency of recognizable disease, paralysis and death would ordinarily result in a relative lack of interest on the part of the medical profession and the laity, but the contrary is true. The suddenness with which poliomyelitis may strike, particularly in the paralytic form, and the wide publicity it has received during the past two decades have made the term *poliomyelitis* a household byword and has engendered an understandable fear of contracting it. A vast amount of research carried on during the last 15 years has furnished much additional information concerning the natural history of the disease, but gaps remain in epidemiological knowledge, so that to the present, a satisfactory hypothesis has not been formulated, nor have all the facts been uncovered which would adequately explain the pathogenesis of poliomyelitis and, particularly, give a suitable answer for the paradox that despite the universality of infection, clinically recognizable cases are relatively few.

Infection and disease result from the interaction of a host and a parasite operating within an en-

vironment common to both, but not necessarily affecting both equally. In the instance of poliomyelitis infection, the natural host is man, and the parasite is the etiological agent—the virus—of poliomyelitis. Changes in any one or more of the three elements of infection—namely, host, parasite, or environment—may affect the outcome of their interaction so that the result may be inapparent infection, nonparalytic disease, paralysis or death. Although similar phenomena may occur in other infections, the disproportionate incidence of these categories and particularly the infrequency of apparent or overt disease have resulted in conjecture and the formulation of hypotheses to explain the so-called peculiar behavior of poliomyelitis. Many investigations have sought an explanation for such behavior in past years, and more recent publications attest that the search continues.^{1, 2} The number of observations, often contradictory, made during the past several decades has made a working hypothesis regarding the host-parasite relationship difficult. From evidence to be presented, there appear to be many factors which may influence the outcome of a poliomyelitis infection. In the light of present knowledge some factors do not appear to be pertinent today, whereas for others a causal relationship seems valid. However, as Bodian³ suggests, any hypothesis must reconcile apparently contradictory observations in order to be satisfactory.

Host, parasite and environmental factors have been proposed as operative in determining whether a particular instance of infection with the poliomyelitis virus results in inapparent or apparent disease. Examples of each element of the infection complex will be cited.

HOST FACTORS

Host factors determining the course of infection are included in the term *resistance*, which means the sum total of mechanisms which prevent invasion of the body by infectious agents. It consists of two parts, namely, immunity and inherent insusceptibility. Immunity relates to protection afforded by antibodies produced because of antigenic stimulation, either naturally (by having the infection) or artificially (by inoculation) and by specifically developed tissue-response for a specific disease. The ordinary immune processes of the host do not appear to explain satisfactorily why so few indi-

* Professor and Head, Department of Hygiene and Preventive Medicine, State University of Iowa.

viduals develop manifest disease. However, inherent insusceptibility (autarcesis) has been considered important in this connection. Autarcesis is defined by Aycock⁴ as the ability to resist disease independently of antibody or specific tissue protection, or, putting it otherwise, one can say that he refers to physiologic processes which condition an individual's reaction to the introduction of the parasite. These processes may be genetic or acquired, temporary or permanent, and are based on anatomical or physiological characteristics of the host. In general, the role of autarceologic mechanisms in infectious diseases has not been sufficiently appreciated, and yet it ranks with that of immune mechanisms.

More than three decades ago, Draper^{5, 6} considered anthropomorphic features as a determinant of recognizable poliomyelitis and believed that white children susceptible to the disease conform to a specific body type. He carefully described the anatomical characteristics, among which were the following: irregularity and spacing of teeth; large central incisors; mongoloid and widely spaced eyes; broad short hands and a relatively broad pelvis. Adamson and associates⁷ have recently called attention to these features, which are common to the Eskimoes among whom they report an outbreak of poliomyelitis. Slight credence is accorded this concept today. A more likely factor is *hereditary susceptibility* to paralytic forms of poliomyelitis within family lines which Aycock⁸ has traced back for many generations. In a New England area where satisfactorily complete family histories were obtained, a consecutively interviewed series of patients reported other cases in their family lines in 50 per cent of instances, whereas only five per cent of normal individuals in the same area had relatives with the disease. Aycock interpreted these findings as indicating "the presence of some inherent constitutional factor which determined the selective occurrence of the paralytic disease."

Endocrine imbalance has been studied in monkeys and man by Aycock.⁹ Two series of experiments were carried out. In the first series, enhanced resistance to intranasal instillations of poliomyelitis virus resulted from injection of estrogenic substance into immature, castrate female monkeys. The second series consisted in urinary estrogen assays of poliomyelitis patients and normal individuals, a comparison of which showed a higher average excretion of estrogenic substance among the poliomyelitis cases. These studies suggested to Aycock that there appeared to be some fault in body economy of estrogenic substance which existed before the poliomyelitis attack. He also speculated that *pregnancy* was a probable allied factor and found that poliomyelitis occurred more commonly in pregnant women than in non-pregnant women in the same population group.¹⁰ Fox and associates¹¹ have confirmed this. Numeri-

cal frequencies related to population were not estimated in these studies, but subsequent reports by Taylor and Simmons,¹² by Anderson *et al.*,¹³ and by Priddle and co-workers¹⁴ are based on statistical evaluation of the occurrence of poliomyelitis during pregnancy and among non-pregnant females. In the latter studies it was found that the occurrence of poliomyelitis among pregnant women is greater than among the non-pregnant and in most instances is in the ratio of two or three to one. On the other hand, Horn,¹⁵ in a report of 180 consecutive instances of pregnancy complicated by poliomyelitis, concludes that statistical proof is lacking for the opinion that poliomyelitis is more frequent or more severe in the pregnant adult female than in the non-pregnant.

Reports emanating from a number of countries indicate that the age distribution of cases has changed, for they provide evidence that the disease has become less frequent at younger ages. Dauer¹⁶ feels that any age shift is more apparent than real, in that the age composition of the population has tended toward an increase at older ages. Age does appear to have an effect on the severity of paralysis and on the number of fatalities, as shown by Lenhard.¹⁷ Olin¹⁸ reported fatality rates for adults over the age of 25 years as two to five times higher than for children under seven years of age. The greater proportion, at older ages, of higher-center paralyzes—bulbar and bulbospinal types—largely accounts for these findings.

For many years, *stress*, in the form of excess fatigue or overtiring, has impressed clinicians as a predisposing factor. Study of cases and case controls at Detroit, in 1939,¹⁹ indicated this. An experiment with monkeys²⁰ and more recent clinical studies in man, by Russell,²¹ Horstmann,²² and Hargraeves²³ indicate that stress may be an important mechanism in the occurrence of paralysis. Albrecht and Locke²⁴ could not confirm this in their study of an outbreak in New York State. Russell found that the amount of physical activity after onset of meningeal symptoms had a direct bearing on the degree of muscle involvement. Hargraeves confirmed Russell's findings and also demonstrated that the maximum exertion on one day after onset of meningeal symptoms had a more deleterious effect than the aggregate of activity for the entire period before hospitalization. Horstmann, in a larger group of cases, substantiated the conclusions drawn by Russell and by Hargraeves. Brahdy and Katz²⁵ studied the effect of transportation on the severity of poliomyelitis in local and transported groups whose compositions were statistically comparable and found that the fatality rate of patients transported long distances was three times that of the local group. This experience adds evidence to the role of stress in the causation of apparent poliomyelitis infection.

Ingalls and Aycock²⁶ have postulated that naturally occurring infectious agents may influence

the development of clinical manifestations of poliomyelitis, and they cite preceding throat infection as a probable causative factor in the high incidence of paralysis following an outbreak of the disease at a school for boys.

Tonsillectomy and adenoidectomy have long been considered as a predisposing factor in the occurrence of poliomyelitis within 30 days of the operation. Aycock²⁷ has reviewed the evidence before 1941 and demonstrated that the procedure resulted in a greater number of severe types (bulbar and bulbospinal). However, there is controversy as regards the greater frequency of occurrence of poliomyelitis among the tonsillectomized (within 30 days). We found in 1939, using controls,¹⁹ that 5.0 per cent of 23 deaths, 5.1 per cent of 521 cases and 7.5 per cent of 497 case controls* had a tonsillectomy performed within 30 days of the occurrence of the disease. In this experience, tonsillectomy *per se* did not appear to influence the appearance of recognizable disease. Where virus is absent, disease cannot develop. However, when the disease resulted, the chance for a severe type developing was definitely enhanced. The bulbar type was present in 27 per cent of the tonsillectomized, as against 4.2 per cent in the non-tonsillectomized.

The occurrence of poliomyelitis following a history of tonsillectomy at any time in life was brought to attention in 1941 by Fischer and Stillerman²⁸ and by Vaughan and Top.¹⁹ Lucchesi and LaBocchetta,²⁹ on the basis of 432 cases studied in 1944, reported that among patients with tonsils absent at the time of infection 76 per cent developed the bulbar type and 61 per cent the bulbospinal type of poliomyelitis. Top analyzed nearly 2000 cases covering the 10-year period 1940-1949³⁰ and found that the proportion of poliomyelitis cases having a history of tonsillectomy at any time in life was 93.5 per cent for deaths, 85.1 per cent for bulbar and 68.7 per cent for the bulbospinal cases. In an analysis of more than 2800 cases, Anderson and Skaar³¹ found the risk of developing poliomyelitis three times greater in tonsillectomized than in non-tonsillectomized persons and the risk of developing the higher-center types of the disease 11 times greater in the tonsillectomized. A report by Southcott,³² one by Weinstein and co-workers³³ and a later paper by Anderson *et al.*³⁴ confirm the demonstration that the occurrence of the severe higher-center type is significantly greater in individuals who have had their tonsils and/or adenoids removed, irrespective of the time elapsed between the operation and the disease.

Exposed dental pulp as an avenue for entrance of poliomyelitis virus has been considered by several groups of workers,^{35, 36, 37} and their studies indicate that a much higher proportion of poliomy-

elitis patients have dental pulp exposure than a group without poliomyelitis at comparable ages do. A more recent report by a set of investigators³⁸ who compared poliomyelitis patients and their siblings showed no significant difference in the two units with respect to dental pulp exposure. Patients with bulbar involvement failed to show significant differences in pulp exposure when compared with their siblings.

Poliomyelitis following inoculation of presumably sterile material has occasionally been reported since 1921; it has been considered rare until recently. In 1950, four papers^{39, 40, 41, 42} from abroad called attention to an aggregate of 100 cases which developed following antigen injections—principally mixtures of diphtheria and pertussis toxoids, alum precipitated. Many others have reported on this phenomenon since. Anderson and Skaar⁴³ found information concerning inoculation in the records of 2677 poliomyelitis cases in the Minnesota epidemic of 1946. Among the cases there were 127 with a history of inoculation with one or more antigens, and in 85 the date of injection, product and amount used, and the extremity in which injected were confirmed by the physician who gave the inoculations. The investigators found a correlation between injection of antigen and poliomyelitis only when the interval between the two was under one month; none existed for intervals between two and six months. Additional evidence of an effect was noted in the greater proportion of cases with paralysis occurring in the injected arm (more than 50 per cent) in the first month, whereas the proportion with arm paralysis between the second and sixth month was only 21 per cent more, a finding which more nearly approximates normal experience, where the arm-to-leg ratio of paralysis in spinal cases is one to three or four. The kind of antigen injected was found to be unimportant. In contrast, Korns and associates⁴⁴ state that injection of antibiotics, insulin and the like are also involved.

PARASITE FACTORS

Broadly speaking, it has not appeared likely that factors peculiar to the parasite have been responsible for the occurrence of recognizable cases of poliomyelitis. With the infection so common, with the majority of members of a household of a case infected, demonstrable both before and after discovery of a case in the family circle, and with careful consideration given to such items as dosage and virulence of the organism, it is difficult to see how parasite factors could be primarily responsible for determining the occasional case, paralysis or death among so many invaded by the organism.

Since 1931, it has been known that more than one strain of virus was involved. In 1949, Bodian, Morgan and Howe⁴⁵ reported three basic immunological types of strains, and the National Founda-

*The discrepancy between the number of cases and case controls arises from our having to discard from the study those case controls which developed poliomyelitis.

tion for Infantile Paralysis selected four groups of investigators in as many universities to work on the problem. Each group independently classified 100 strains of the virus, and their report⁴⁶ listed three immunologically distinct types of poliomyelitis virus and designated them types I, II, and III (commonly known as the Brunhilde, Lansing and Leon, respectively). Studies indicate that all types are world wide in distribution and that each type has differentiable strains. Although it is known that the Mahoney strain, belonging to the type-I virus group, is particularly pathogenic for monkeys, no similar information is as yet available on the pathogenicity of all known strains in man. The disease is exceedingly protean in character, varying clinically from area to area not only in the same year but also, and more particularly, from year to year. An example of this is found in a typical experience, which showed that there were 300 cases and 3 deaths one year, but that the next year, with essentially the same number of cases, there were 35 deaths. The possibilities of a change in virulence of the organism or of area-wide infection by a strain more pathogenic for man than most others should certainly be considered. But up to the present, there have been an insufficient number of virus identification studies, linked with clinical severity of cases, to determine whether parasite factors are operative. It is likely that improved methods of virus culture and identification may soon furnish information on this point.

ENVIRONMENTAL FACTORS

In the United States and in other civilized countries, *economic status* has not appeared materially to affect the occurrence of apparent poliomyelitis, although in Buffalo, Ames⁴⁷ has shown a relatively earlier age onset of poliomyelitis in families with a low economic level than in those living in a high rental area. Hill and Martin⁴⁸ comment on the numerous observations that "in a country exposed to a widely spread outbreak, the incidence is likely to fall more heavily upon the communities that enjoy the most favorable environment and the best social conditions." They studied the distribution of cases in relation to social environment by including 125 great towns and 148 smaller towns in England and Wales for the year 1947. No association between attack rates suffered in the 1947 epidemic and the infant and general death rates experienced for the preceding two years could be demonstrated. In other words, favorable mortality rates indicating more favorable social conditions in a city did not foreshadow an unduly heavy incidence of cases and deaths when poliomyelitis became widespread. It is a well known fact that among more primitive peoples in the tropics, poliomyelitis is a disease of infants and young children and that adults are rarely found with recognizable manifestations.⁴⁹ This is in sharp contrast to the age distribution of cases among the more civilized

populations of the world. The explanation given has been the improved sanitary facilities of the civilized as against primitive peoples and there is no doubt about the differences in sanitation, in the quality of housing, and in the degree of crowding, among the conditions that could be mentioned. However, the fact remains, as Paul *et al.*⁴⁹ have demonstrated, that recognizable disease still exists at younger ages in more primitive settings. Thus, why cases occur at all is not answered by the economic or sanitary status of peoples.

Armstrong has called attention to the possible effect of *seasonal variation*⁵⁰ and *atmospheric conditions*⁵¹ on the incidence of poliomyelitis. His hypothesis attempts to relate seasonal occurrence of the disease to "generally observed alterations in the upper respiratory tract due to atmospheric changes, notably in temperature and relative humidity of inspired air." This concept is elaborated in the paper on atmospheric conditions with evidence that there is a positive correlation between "the curve of average relative humidity of atmospheric air warmed to 90° F. and the curve of incidence for recognized poliomyelitis for the same area, based upon either monthly or weekly intervals of time." This indicates that dry air with a relative humidity of 28 per cent at 90° F. tends to prevent apparent poliomyelitis in a population, whereas more heavily water-laden air at the same temperature seems to favor its spread. Bradley and Richmond⁵² admit that seasonal conditions are a factor in the spreading power of poliomyelitis virus, but meteorological observations using dry bulb and vapor pressure readings made prior to, during and after the seasonal rise of poliomyelitis could not correlate the incidence of the disease with any specific meteorological factor. They found that the incidence of poliomyelitis during the season was not influenced "to any great degree by variations in temperature and humidity." Both groups of workers cited agree that an insufficient number of observations have been made over too short a period to determine the influence of temperature and humidity on the occurrence of recognizable poliomyelitis.

COMMENT AND SUMMARY

With the knowledge that poliomyelitis is a universal infection, epidemiologists and other investigators in the biological sciences have wondered why so few instances of disease, paralysis and death develop from so many known infections. Comparison with some other infections where overt disease is also an exception indicates that the association of man and the parasite of poliomyelitis is a fairly satisfactory adjustment within an environment practically common to both. Certainly, there is evidence of a close approximation to commensalism, the latter term being defined as a sitting down and eating together or as an adjustment of host and parasite such that the least harm

and some benefit accrues to both. It is conjectural, however, in the instance of poliomyelitis infection, whether any benefit accrues to the host.

Host, parasite, and environmental factors have been discussed, and although, in the light of present knowledge, little weight is given to some, yet the amount and kind of evidence which has been accruing for such factors as stress, tonsillectomy and inoculation, among others, indicates that the determining factors which influence the occurrence of recognizable—as against nonrecognizable—poliomyelitis may generally lie not so much in parasite variations as in non-immune factors affecting the host and perhaps in environmental changes. This does not mean that the parasite necessarily plays a minor role at all times and under all conditions. Poliomyelitis virus culture in non-neural tissue⁵³ and in tumor (Tela) cells and the recent finding of virus in the blood of both chimpanzees and man early in the course of the infection^{54, 5} are new research tools which will add to knowledge concerning activities of the parasite particularly and are making it possible to review the pathogenesis, or, as Bodian states, “the virus-host relationships” of poliomyelitis.⁵⁵ He has recently performed that task in an excellent article in which the evidence has been re-examined and a new hypothesis relating to the pathogenesis of poliomyelitis has been formulated.

The relation between the age at which the infection first occurs and environmental factors does not adequately explain the occurrence of recognizable cases.

The entire discussion points up the fact that there is a body of information concerning poliomyelitis which may be comparable in extent to that known for certain other diseases, but the limited number of recognizable cases arising from an immense number of infections makes validity of knowledge concerning the natural history of this disease a matter of special concern. The necessity for continued investigation is obvious.

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Tracheotomy and Bulbar Poliomyelitis

WORTHEY C. BODEN, M.D.

SIoux CITY

DURING THE POLIOMYELITIS epidemic of 1952 in the Sioux City area, the management of the patient with inadequate oxygen exchange was of prime importance, and it was my duty as an otolaryngologist to use the proper procedures in the indicated cases.

The value of tracheotomy to maintain an adequate airway is well known, and tracheotomy is one of the oldest operations in the history of medicine. It was first employed in Bithyria during the first century B.C. by Asclepiades of Prusa, to save patients from suffocation.¹ However, a new chapter was opened in 1943, when Dr. Thomas Galloway began treating bulbar poliomyelitis as a respiratory problem.

The factors influencing inadequate respiratory exchange are numerous and are often difficult to interpret and evaluate. A practical classification of the major mechanisms that prevent effective respiration is as follows:

1. Respiratory failure due to paralysis of the primary respiratory muscles, the intercostal muscles and the diaphragm.
2. Respiratory failure due to pharyngeal paralysis, where the free flow of air is continually interrupted by unswallowed secretions or vomitus.
3. Respiratory failure due to central disturbances, where the clinical situations are most difficult to analyze. Probably the respiratory centers, the vasomotor centers and the vagal centers of the brain stem are all involved to a variable extent.²

Any two or all of the above mechanisms may be in effect in the same patient, and clinical evaluation is therefore difficult.

PATHOLOGIC PHYSIOLOGY

The respiratory obstruction in poliomyelitis may be caused by several mechanisms.³ Secretion ob-

struction is predominant, and central stimulation of the salivatory nuclei due to anoxia or inflammation has been suggested as an important cause of the hyposcretion. Loss of the cough reflex and the loss of the swallowing mechanism cause accumulation of the fluid which normally would be expelled. Also edema of the lungs and tracheobronchial inflammation produce an increase of fluids.

The loss of the cough reflex follows from the peripheral paralysis of the intercostal and abdominal muscles and the diaphragm. The coordination of the swallowing mechanism is complicated and is easily disturbed centrally. Peripheral nerve paralysis of the 5th, 9th, 10th, 11th and 12th cranial nerves leads to loss of function of the pharynx, tongue, floor of the mouth and larynx, with consequent interference with swallowing, which further adds to the increasing secretory obstruction. Flaccid vocal cords from vagal paralysis contributes another form of breathing obstruction by a ball-valve-like action.

As we can see, any respiratory obstruction tends to hasten such lung complications as infection, atelectasis and pulmonary edema. In these cases with some respiratory obstruction, there are also the effects of hypoxia or anoxia and carbon-dioxide retention. The prevention of acidosis and anoxia is dependent on maintaining a free, unobstructed airway. The symptoms of anoxia may be insidious in onset and may be mistakenly attributed to progression of the infectious process in the nervous system. The complications that follow development of hypoxia and hypercapnia may seriously endanger the patient and may be more damaging than poliomyelitis.

With a reduction in the ventilating capacity of the lungs, there is an accumulation of carbon

dioxide and a decrease in the oxygen saturation of the arterial blood, which can lead to a respiratory acidosis and, if allowed to progress far enough, may result in asphyxia, which is irreversible if intervention is late.

In cases of secretory obstruction, of whatever nature, the basic pathologic physiology consists in failure of the cough mechanism which normally would clear the respiratory passage of accumulated secretions. With the obstruction, we get the effects of anoxia, which include an increase in capillary permeability, pulmonary edema, and damage of the central nervous system and cardiac tissue. The anoxia then causes hypercapnia and uncooperativeness in its early stages, and with higher concentrations induces narcosis, anesthesia, respiratory depression and circulatory collapse.

The only treatment providing any real hope of success consists in the removal of the obstructing secretion from the respiratory passages and the reestablishment of normal alveolar ventilation. In cases of secretory obstruction, a tracheotomy is the only treatment fulfilling the necessary requirements, and we should stress the safety of a correctly performed tracheotomy.

By becoming familiar with the symptoms encountered in cases of poliomyelitis where there is inadequate respiratory exchange, and by quickly recognizing changes that point to respiratory dysfunction, we can give our best service and be of most value. Also by encouraging the nursing staff and the physician in charge to be cognizant of the early changes, we can hope to lower the mortality in these cases.

The symptoms encountered in these cases of respiratory obstruction were headaches, increased mental activity, agitation, dyspnea, uncooperativeness, anxiety and restlessness. These become apparent early. Usually the respiratory rhythm is unchanged, but respiration becomes shallow, and the rate tends to increase. The minute volume of air exchange therefore decreases. A simple way to test for this complication is to have the patient count after taking a deep breath. If at first he can count to 45 or 50 with one breath, and later can count only to 25 or 30, it is obvious that he has lost ground.

In the management of poliomyelitis, any signs of difficulty in dealing with pharyngeal secretions is a symptom which requires careful attention, and prompt intervention must be instituted in order to achieve a satisfactory result. The value of this symptom—difficulty in dealing with pharyngeal secretions—cannot be stressed too strongly, for frequently an immediate emergency develops, requiring prompt intervention. Even though the patient has been under close observation, he may die before a tracheotomy can be done.

Later, confusion, disorientation and irrationality are observed, leading to convulsions, unresponsiveness, lethargy and coma. Increases in pulse

rate and blood pressure frequently accompany this condition. Cyanosis is a late sign, and when it occurs, the prognosis is much more uncertain. Of course, we feel that tracheotomy should have been done much earlier.

The indications for tracheotomy in poliomyelitis are as follows:⁴

1. Progressive anoxia, with secretions in the upper airway.
2. Pronounced restlessness, irrationality or unconsciousness in a patient who does not respond immediately to suctioning.
3. Continued restlessness, irrationality and stupor in a respirator patient, even though paralysis is spinal.
4. Fluid accumulation not certainly taken care of by suction in any patient.
5. Paralysis or spasm of vocal cords.
6. Rapidly progressive bulbar symptoms.
7. Signs of vasomotor failure.
8. Absence of well trained and efficient attendants, adequate equipment or cooperation of the patient, with consequent doubt that the airway will be kept constantly free of secretions.
9. Need for use of a respirator, in bulbar patients.
10. Constant spitting, nervousness and tossing, with constant efforts to get rid of saliva.

Galloway states: "Tracheotomy is more necessary when the attending team has had little experience with the disease. If all the personnel were thoroughly trained and the mechanical arrangements perfect, tracheotomy might be seldom required. But unforeseen failures occur too easily."⁵

Tracheotomy is performed to serve the purpose of furnishing a free airway, so that the air necessary for respiration does not need to be moved down a pharynx full of secretions and through a larynx continually in spasm.

The presence or imminence of anoxia, as manifested by the following signs and symptoms formed the basis for the decision to operate:

1. Irregular, shallow and periodically apneic respiration;
2. Exhaustion, agitation, restlessness or apprehension;
3. Progression of bulbar involvement, with increasing dysphagia; and
4. The presence of suffusion, cyanosis and retraction of the chest wall.

One should not wait for severe choking attacks, with cyanosis, to prove the necessity for tracheotomy. It is frequently difficult to tell whether a patient's respiratory difficulty is due to central disturbances of the respiratory center, or pharyngeal secretions.

The cases reported here are ones treated by all the physicians in the Sioux City area and were seen by the laryngologists only when consultations were sought by their physicians. During the height of the epidemic, my associates and I were avail-

able on the floor where the polio patients were confined. It was our feeling that by making ourselves readily available we encouraged the physicians to seek the assistance of us laryngologists. During the six-months episode, from June to November, there was a gradually increasing realization of the benefit obtained from early tracheotomy.

In our evaluation period, the patient with respiratory dysfunction, whether spinal or bulbar in origin, was observed closely. Conservative measures such as positioning, suctioning, oxygenation, hydration, antibiotic therapy and proper nutrition were practiced. If the patient did not respond to these measures, then it was recommended that tracheotomy be done.

Tracheotomies were done on the majority of our patients when they were in the respirator, and we didn't find the technique difficult, for we were able to get quite adequate exposure by proper positioning of the patient and the use of a support attached to the respirator which depressed the cuff a sufficient distance to make the suprasternal notch readily accessible, assuring adequate incision and exposure, and also permitting satisfactory postoperative care.

When tracheotomy was done, we had an emergency operating room on the floor where the polio cases were kept. The patient was moved to the operating room in the respirator, the area was prepared and the midline incision was made under local anesthesia. The trachea was exposed, and the incision was made through the third tracheal ring. After the tube was inserted, the trachea was suctioned. In cases where there were large amounts of secretion present, the wound was packed with vaseline gauze and covered with clean gauze pad. The wound was not closed tightly, but at times sutures were placed at the upper and lower ends of the wound. The postoperative care consisted of frequent suction, as needed, oxygenation, and change of tubes—usually every three or four days or as often as necessary.

It was our policy not to use the inner tube, for we wanted to provide as large an airway as possible.

In the Sioux City area, the distribution of cases in the poliomyelitis epidemic of 1952 was as follows:

January to April	0
May	1
June	50
July	294
August	325
September	170
October	69
November	11
December	3
TOTAL	923

As can be seen, the majority of the cases occurred during July, August and September. In the 923 cases, there were 53 deaths, or a mortality rate

of 5.7 per cent. In those 923 cases, there were 79 tracheotomies done, or 7.5 per cent. Our mortalities in tracheotomy cases, as compared with mortalities in other epidemics, were as follows:

Area	Number of Tracheotomies	Mortalities	Per Cent
Sioux City, 1952	79	36	45.6
Minneapolis, 1946	75	46	61.3
Pacific Coast, 1948	198	101	51.0

From the following table, one can see that slightly more than 50 per cent of our patients who were under the age of 20 recovered, whereas over the age of 20, slightly less than 50 per cent recovered. Our youngest patient was four years of age, and the oldest one was 51.

Age Group	Number of Tracheotomies	Recovered		Died	
		Number	Per Cent	Number	Per Cent
0-9	21	12	57	9	43
10-19	22	14	63	8	37
20-29	23	11	48	12	52
30-51	13	6	46	7	54

Of the 79 tracheotomies, there were 52 (66 per cent) males and 27 (34 per cent) females. Of the 36 deaths, 23 (64 per cent) were males and 13 (36 per cent) were females.

In trying to consider and evaluate this all-important problem, we have to realize that the symptoms of poliomyelitis may vary with the different epidemics. However, we were all impressed with the value of tracheotomy, and it was our impression that if errors were made, they were made more frequently in postponing tracheotomy, rather than in doing it too early or unnecessarily.

SUMMARY

The purpose of tracheotomy is to prevent obstruction, and not primarily to overcome it after it has occurred. A therapeutic tracheotomy in bulbar poliomyelitis is indicated when the patient exhibits any of the following symptoms: respiratory distress, as evidenced by recurring attacks of cyanosis; moist rales, or laryngeal stridor; inability to cough effectively; pharyngeal pooling of mucus; or prolonged stupor, with aspiration of pharyngeal secretions.

In any doubtful case, the risk of delay is far greater than the risk of performing a tracheotomy. Surgical intervention cannot be expected to change the prognosis when the patient is *in extremis*, or after asphyxia and cardiac exhaustion have brought the patient beyond the stage of possible recovery.

For the patient who may have difficulty handling pharyngeal mucus because of an inability to cough effectively, a prophylactic tracheotomy should be seriously considered whenever early and progressive bulbar signs are present and when a long siege in the respirator seems probable.

No paper advocating tracheotomy could be said to be improperly enthusiastic. I feel tracheotomy should be done early when needed; that it adds very little risk when done properly; and that the so-called mutilating nature of the procedure has been exaggerated and is not justified when the operation is correctly carried out. Tracheotomy has a limited but important place in the therapy of bulbar poliomyelitis, and for the patient who needs it, it may be life-saving.

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DIAGNOSIS and TREATMENT of PRURITUS ANI

J. W. DULIN, M.D.

IOWA CITY

PRURITUS ANI IS A symptom complex which is most annoying to the patient and often is little understood or appreciated by his physician. In its management, a careful search must be made for the underlying cause, and if sufficient time and effort are given to the investigation, a surprising number of patients may be systematically classified, etiologically. A suitable history must be secured and proper physical examination must be performed, including perianal, anal, and proctoscopic, in addition to pelvic investigation and indicated laboratory tests. When the cause is determined and easily eliminated, the itching is relieved, but otherwise, a real challenge in therapy arises which tries the patience of the physician as well as of the patient. It is patients of this latter group who eventually are seen by surgeons interested in the perianal, or anal and rectal, surgery. A logical classification of the etiologic factors includes systemic causes, local causes and unknown causes. It seems that the possibility of psychogenic and/or functional causation has been overemphasized.

Of the systemic cases, the diabetic—and especially the subclinical diabetic—is the patient most often missed. The middle-aged, obese female needs a glucose-tolerance determination, and all other patients should be given such a test when the physician is in doubt. Allergic reactions to diet or contact with sensitizing agents such as horsehair, feathers, soap or perhaps the wool or nylon in underclothing must be considered and often eliminated by trial, by simple diet or by elimination of suggestive local contacts.

Anorectal or vulval disturbances may become apparent following the ingestion of certain antibiotics, particularly aureomycin, terramycin and chloromycetin. There may or may not be an associated diarrhea at the onset of the use of the

medication. Although a small amount of the drug over a short period of time may produce the difficulty, a period of two weeks usually passes before symptoms occur. Some patients have an additional ulcerative proctitis or ulcerative colitis. The pathogenesis may be traced to disturbances in the normal intestinal flora, in which yeast or other organisms are left to establish a local infectious dermatitis. After discontinuation of the drug, the ingestion of buttermilk seems helpful. Prolonged use of mineral oil or laxatives may produce pruritus, perhaps for the same reasons. Dietary indiscretions and especially alcoholic beverages are often responsible for pruritus. The simple elimination of liquor, including beer, has been followed by complete relief of perianal itching in numerous patients. If one routinely questions the alcoholic individual, he often can obtain an admission of a tendency for anal pruritus.

Excessive moisture in the area, whether due to perspiration, drainage from fistulas, fissures, prolapsing hemorrhoids or polyps, is a frequent local etiologic factor. Healing of post-operative anal wounds may be accompanied by itching because of secretions or because skin preparation procedures have been used.

Itching may result from poor anal hygiene. Excessive soaping of the region, especially if so called "strong soaps" are used, may produce a dryness of the skin which allows for a low-grade infectious dermatitis. This region is abundantly supplied with sebaceous glands, and the continual removal of the normal skin oils is not advisable. Once the dermatitis has started, the scratching further traumatizes the skin and allows for additional entry of organisms into sweat glands and hair follicles.

Parasites such as pinworms must be considered.

These may be seen on the anal or rectal wall at the time of examination. Because they are common in children, the parent may have observed the worms in the stool.

Fungus infections and seborrheic dermatitis may be suspected when other foci are noted. Microscopic study of skin scrapings or culture may confirm a diagnosis.

Pruritus ani may also be a result of diseases of the genital organs and of the lower urinary tract. Disfunctioning ovaries or leukorrhea in the female and occasionally a prostatitis in the male must be considered.

When one has carried the available etiological investigation to completion, there remain many patients with an idiopathic pruritus. Although in some of these the ailment may be of psychogenic origin, it even then will respond to realistic methods.

The itching may be periodic or constant, and at times almost unbearable. Symptoms are usually worse at night and often greatly disturb sleep. Many patients are humiliated and worried, as well as depressed because of the inability to understand the condition.

Locally there may be no gross, objective evidence of pruritus. The typical skin has radiating, thickened folds, with fissuring and excoriations. There may be hyperpigmentation or complete loss of the normal pigment. Hyperpigmentation usually accompanies the grayish-pale moist type. The changes may extend to the skin of the perineum and to the skin of the external genitalia.

One should exercise caution in determining the efficacy of the therapy used. A patient's failing to return to keep his appointment does not mean that he is cured. Often he has sought advice elsewhere. Over two hundred past or present therapeutic procedures are available. They include local and systemic measures. The control of diabetes, discontinuation of a given antibiotic, elimination of the laxative habit or cessation of the use of alcoholic beverages is promptly followed by improvement.

When the etiology appears related to local pathologic lesions such as prolapsing hemorrhoids, fissure or fistula, adequate surgical therapy is necessary. Redundant skin folds should be excised so that the healed state will leave a surface smooth and easily cleaned by the average, proper anal-region hygiene. But the patient should be told that the surgical correction of the various anatomically abnormal lesions may be only the first stage in the treatment for the pruritus, since little improvement in itching may occur. Cryptotomy has rarely, in my experience, relieved anal pruritus.

When the patient hasn't benefited significantly from routine proper anal hygiene, minimal or non-use of soap and elimination of clothing which produce excessive perspiration or contact irritation, then fractional x-ray therapy is recom-

mended. It is of greatest help in the moist variety, especially if a fungus is present. About half of the patients respond to x-ray therapy. A limit of three to five treatments are given, depending on dosage and frequency of treatments. Overdosage of x-ray may produce dangerous sequelae.

Refractory anal pruritus is likely to respond dramatically to corticotropin (ACTH) or cortisone. Daily doses are required, and usually 50 to 200 mg. of cortisone produces relief within a short period.

One may start the first day with 200 mg. in four divided doses and after the second day reduce the amount by 25 mg. per day to minimal daily effective doses of perhaps 25 mg., morning and evening. The therapy is continued for 28 days after relief of symptoms. The symptoms usually reappear after variable lengths of time, although some patients have now gone for months without recurrence. Hydrocortone acetate (2.5 per cent) ointment is now on the market and has been used with great beneficial effect. These hormones may produce the same striking results as the estrogenic substances do in the female who has a pruritus related to ovarian disfunction. Although these materials may not be curative, they are most useful in the management of certain severe pruritus problems.

When skin changes are typical, tattooing of the anoperianal and perineal skin with mercury sulfide and water can be performed with a tattooing instrument. For the average case, the procedure requires about an hour. Some of the unsatisfactory results of this treatment are explained by the operator's inability to deposit the mercury sulfide properly. Even a repeat attempt may fail. When the procedure has been properly performed, the patients are immediately relieved, and except for the color change, the skin becomes quite normal within a few weeks. Why this treatment produces dramatic improvement is unknown. Perhaps there is an effect on the cutaneous nerve supply. A possible complication of the procedure is toxicity, either local or systemic, but when reasonable precautions are observed this is not considered a serious drawback. Fifty per cent of patients so treated are relieved of the itching.

CONCLUSION

1. Adequate history, physical examination and laboratory tests are necessary to evaluate pruritus ani.
2. Correction of certain systemic causes is necessary.
3. Associated proctologic lesions require surgical elimination.
4. Simplest methods should first be tried.
5. Certain hormones are helpful.
6. In selected cases, tattooing with mercury sulfide is indicated.
7. Persistent efforts and a critical analysis of various therapeutic procedures are still required.

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CAN THIS BE YOUR TROUBLE?

Nowadays, a predominant share of medical practice takes place, not in the patient's home and at his bedside, but in the physician's office and in the hospital. For a number of reasons, that is precisely as it should be. But the shift in locale has occasioned some difficulties that are important enough to deserve careful attention. One of them is that the doctor no longer gives patients and their relatives frequent opportunities to treat him as an honored guest in their homes, and rather than seeming a friend of the family, gives them the impression that he is less interested in them as individuals and less sympathetic toward their difficulties than his father, or his other predecessor, used to be. Strange though it may seem, sick people put so high a premium upon their doctor's ability and inclination to give them obvious sympathy and individualized attention that even if they knew the difference, they would choose the medically less efficient man if he happened to possess the friendlier manner.

Barricaded from the patients in his waiting room, and represented there and on the telephone by a clerk-typist or an office nurse, the physician frequently—let us hope it is *usually*—is unaware of how his mid-century mode of practice is operating to his further disadvantage. Indeed it is our opinion that the avidity with which the public receives articles critical of Medicine in the current magazines is traceable principally to his employees' mishandling of his patient contacts.

The major gripe that rankles in a patient's mind is the amount of time he has to waste in the wait-

ing room before he gets in to see the doctor. There may be an occasional physician who refuses to use an appointment system because he seeks to bolster his ego by keeping his waiting room full to overflowing. In most cases, however, it is the office girl who is at fault. She may be incompetent and consequently unable to arrange appointments so as to keep a steady stream of patients moving into and out of the waiting and examining rooms. Or since she may enjoy basking in the borrowed importance which her association with the medical profession has given her, it quite possibly is *she* who is intent upon making the office seem busier than it is. Such women—unfortunately they are legion—make their employers seem altogether aloof and completely inconsiderate.

When a patient telephones to ask when he may see an EENT man whom we know, his office girl says, with an unmistakable sneer in her voice, "We don't work by appointments. If you come at one o'clock, the doctor may be able to see you." The patient is disappointed to learn that he can't have an appointment, for he knows that even if he were given one, a half-hour wait is no more than par in any doctor's office. Without one, he can count on sitting at least an hour. But he is additionally and quite gratuitously annoyed by the woman's use of the pronoun "we," as if she shared in the doctor's practice of medicine.

If the patient chooses to drive his car when he goes to see that doctor, he has to choose between paying half a dollar or seventy-five cents for space in a parking lot and leaving his car half a mile from the office, for no parking meter will permit him so much time as he knows his call must take. When he arrives, at one o'clock, the room contains about twenty people, though there are chairs to seat no more than fifteen. Though he is ill, or thinks himself so, and though he has just walked six blocks, he must stand throughout the next forty-five minutes.

A further disturbing thought occurs to him. The other nineteen people in the room—or, to be charitable, fourteen or fifteen of them—are likewise sick. One doesn't ordinarily think of a doctor's office as a contagion center, but this one could easily be the exception.

Finally it is his turn to take a chair, and he sits down. More patients keep arriving, and it seems for a moment that perhaps the receptionist didn't instruct quite everyone to come at the same time. But then it develops that these are privileged characters, for they are admitted to the examining rooms without delay. One of the men who has waited for some time asks the receptionist for an explanation of their special treatment and is told, quite as if it were none of his business, that they are postoperative cases whom the doctor always sees as soon as they arrive.

Time drags on, and it is now three forty-five. There are always standees, and a little girl who

has come by herself squeezes through the door and stands obscured behind several adults. Half an hour later she is no longer there, but no one is sure of having seen her leave. Her mother has telephoned to find whether or not she found her way to the doctor's office, and the receptionist has answered, "No." It is undoubtedly true that the receptionist failed to see the child, for the youngster, timid and unaware of the necessity for coming forward and identifying herself, had never pushed her way to the desk.

At last, after four o'clock, it is the patient's turn to see the doctor. The physician is cordial, considerate, thorough and efficient. The patient has every reason to believe that he must be quite unaware of the horrible way in which his outer-office business is being mismanaged. But the patient is unwilling to return the following week, as the doctor wishes, for he is determined not to go through the ordeal of calling to see him again. And he feels, moreover, that whatever bad publicity befalls the medical profession, though it may not precisely be deserved, nevertheless has something of poetic justice about it.

MEDICAL LIBRARY NEEDS MORE SPACE

The Iowa State Medical Library, which currently occupies two-thirds of the second floor of the Historical Building, on the State Capitol grounds, needs more space if the Librarian, Jeannette Dean-Throckmorton, M.D., and her staff are not to be smothered beneath their rapidly accumulating collection of books and journals. Dr. Throckmorton has asked for the remainder of the floor, but has had no response from the officials who have charge of the building.

The Library, an independent agency of the state government, though it operates on the comparatively modest budget of \$25,300 per year, now possesses nearly 50,000 medical volumes, more than 100,000 unbound journals and a museum of medical instruments and rarities. Approximately 1,593 books and 5,050 journals are being added each year, through purchases and through gifts, chiefly from doctors. The book-stacks are necessarily so numerous that they leave almost no room at all for the doctors who come to use the collection, and book-stacks for the overflow volumes already occupy half of the small office in which the librarian and two of her assistants have their desks.

The service provided by the Library—including loan by mail of books and journals requested by the physicians of the state and regular mailings of current journals and other literature to doctors who have placed standing orders—is of great value both to the profession and, indirectly, to the public at large. Consequently, the JOURNAL wants to urge members of the Society to intercede with legislators and other state officials to assist the Library in getting the additional space that is essential to its continuing its efficient operation.

SURGERY AND CARDIAC PROGNOSIS

Because phenomenal advances are being made in all branches of medicine and surgery, even the average professional meeting has become a truly exciting affair. But in no branch of our work are successes being achieved more rapidly and dramatically than in cardiac surgery. At the recent meeting of the American College of Cardiology, in Chicago, a particularly distinguished group of men surveyed recent progress in that field. Dr. Willis J. Potts, surgeon-in-chief at Children's Memorial Hospital, Chicago, emphasized the benefits of surgery on the tetralogy of Fallot. He was followed by an internist, Dr. S. Gilbert Blount, Jr., associate professor of medicine at the University of Colorado and director of the cardiovascular laboratory there, who spoke on the changing prognosis in congenital heart disease.

The prognosis in coronary artery disease, as affected by surgical revascularization of the myocardium, was reviewed by Dr. Claude S. Beck, the father of coronary surgery, who is professor of cardiovascular surgery at Western Reserve University. The results of cardiopericardiography on many thousands of dogs and on a lesser number of human beings, as evidenced by follow-up arteriograms and the course of succeeding coronary occlusions, as he presented them, were sensational. Then, following that exposition of the types of operations for coronary artery disease and of their results, Dr. Bernard Brofman, director of the cardiovascular laboratory at Mt. Sinai Hospital, Cleveland, presented an internist's valuation of coronary surgery.

The symposium was completed by a discussion of surgery for acquired valvular disease of the heart by Dr. Edward E. Avery, associate in thoracic surgery at Northwestern University, and Dr. Louis A. Soloff, associate professor of medicine at Temple University. Dr. Soloff posed the question: "Has surgery for acquired valvular disease improved the patient's prognosis?" The ensuing discussion was spirited, and there certainly wasn't any unanimity of opinion. One must realize that cardiac surgery is still comparatively new. For example, the first successful commissurotomy was done in 1948. But individual cases that were reported give one ample grounds for optimism. A farmer who had mitral stenosis and had had hemoptysis and decompensation was doing heavy farm labor six weeks following his operation and said he felt fine. A mechanic who could not walk across the room without dyspnea and whose physician had thought him inoperable has just returned from a fishing trip which he undertook less than five weeks following a most difficult and complicated commissurotomy.

Of course there will be inoperable cases. Operating for coronary artery disease is not operating on a good-risk patient. What the next few years will tell, no one knows, but statistics are in the making, and as we grow older, we come more and more to appreciate the courage of the men who

are blazing the trail. By their failures and successes they are establishing the practices of tomorrow.

LIVING WITH COLOR

Ever since man first saw a rainbow, he has been puzzled by questions of color. In the early eighteenth century, Sir Isaac Newton first analyzed light, and following his discoveries many relevant facts about color have come to be understood.

A vast number of colors can be comprehended, but according to Dr. Wilhelm Ostwald, who has prepared a Color Harmony Manual, only about 1,000 need to be isolated and identified for dealing with everyday experiences.* Obviously, such a system as he has worked out has many applications in the arts and in industry, for by this means accurate communication about color is possible and the perfect duplication of shades and tints is facilitated.

Numerous and varied applications of the Ostwald system to clinical medicine and medical research have been made. Eli Lilly & Co. ascertained that color may influence the acceptability of a drug for young patients, even in tablets or capsules that are tasteless. For instance, it was found that twice as many children preferred a red and yellow capsule to one colored red and green in an otherwise identical drug. This explains why Multicebrin Jr. is marketed in red and yellow gel-seals.

Faithful, permanent records of color changes due to hyperemia or anoxia of tissue can be made, and changes in the degree of jaundice and other biological pigmentation can be charted, using the Ostwald system. Such color changes otherwise would be difficult to reproduce graphically, but both the identification and interpretation of the successive stages and communication about them is made easy by such a frame of reference. Incidentally, the same holds true for the selection of colored inks for standardized use in this and other medical journals.

A practical example of the Ostwald system has been the selection of harmonious color schemes for decorating hospital interiors. This has been used to advantage as S.U.I. Hospitals, in Iowa City. It is known in general that some colors in the blue and green regions have a quieting effect, while others in the yellow and red regions are stimulating. Some suitable and satisfactory schemes have been used in hospitals—suitable to the general character of the institution, satisfactory in that the rooms are made more agreeable for the patients, and the laboratories and work areas are made more practical for the staff because they are more pleasant.

Certain combinations of colors seem to be universally pleasant, possibly because they are as-

sociated with common enjoyable experiences with color in nature. And although no colors are ugly, combinations of them may be. A variety of suitable color combinations can be selected for any room. If one wall of a room is made different from the other three, a major changes in effect occurs, particularly if the single color is one usually associated with the out-of-doors. One light-blue wall with three light-gray walls make a room cool and clean looking. One red wall and three gray walls will make it cheerful and stimulating. One green wall and three gray recall the pleasantness of the forests. One dark-blue wall and three gray suggest the quiet of the night. And so on. To avoid too much variety in a small room where floor covering, bedspreads, furniture and drapes are also colorful, three gray walls are recommended. Repeating on the fourth wall a hue dominant in the textiles or floor covering is usually enough.

Where fresh, new color schemes have been introduced into hospitals, patients, staff and visitors have responded with pride and pleasure. The transformed areas all have become better places to pass through or work in because their colors have become pleasant to live with. One does not expect gaiety in hospitals, but one can be aware of optimism.

OUR INTEREST IN THE AMA MEETING

Probably the one matter of business coming before the House of Delegates of the AMA in which we in Iowa had the greatest interest was that of joint billing. Last December the AMA House of Delegates referred the problem to the Judicial Council for further study, and that body sent questionnaires to all of the states to ask about procedures common in their area. Following its study, the Council recognized that some nonprofit insurance companies ask for a join bill for services rendered, and that this constituted a new facet of the problem. It also recognized the fact that some patients request a bill covering the complete services, and in consequence, its recommendation was that when an insurance company or a patient specifically requests a joint bill, it shall be ethical for the doctors to present an itemized bill setting forth the services rendered by each physician and the fees charged. The amount of the fee charged should, however, be paid directly to the individual physicians who rendered the services in question.

This statement of the Judicial Council differs from the Iowa statement in that it makes it mandatory that the patient or insurance company request a joint bill. The Iowa plan made it mandatory that the patient's consent to the joint bill be obtained, but did not specify that the wish should originate with the patient. The AMA does this.

The reference committee considering the Council report added another paragraph condemning

* "Living With Color," *SCOPE*, Vol. IV, No. 1, (Spring) 1954.

fee splitting, putting into words the thought already expressed in the Iowa statement.

Although some persons may feel that Iowa was brought into line by the Judicial Council statement, it is comforting to us to know that the Judicial Council merely put into words what had been the intent in Iowa at all times. There has never been any intention of condoning fee splitting. Rather, the whole purpose of the Iowa statement was to make sure the patient knew just what his total bill would be and how much each participating physician received for the care he gave. Payment in instances where no care was given was specifically called unethical.

The osteopathic matter was another one in which Iowa was particularly interested. The Cline report has been before the House of Delegates for a year, and at the San Francisco meeting the report dealt with discussions already held by the Cline Committee and a similar committee of the osteopathic association. Inspection of osteopathic schools to determine whether they are teaching a cult or not is the next step to be taken. The AMA's committee favored permitting such inspection, but the officers delayed decision until the osteopaths' association could vote on it at its meeting in Toronto during the middle of July. Consequently all action was delayed until the results of that vote could be known.

Veterans' medical care was again discussed, and the House voted approval of a Board of Trustees' request that the present policy be upheld.

The question of closed-panel plans was deferred for further study. A screening program for foreign physicians was referred to the Council on Medical Education and Hospitals for study, with a request that it report to the House of Delegates in December.

The American Medical Association, our national organization, is composed of the many state associations, and if it is truly democratic it should reflect the thinking of the doctors of this country. It should be the voice of the majority of the physicians. It is encouraging, therefore, to note that the actions of the AMA House on the joint billing and osteopathic problems were most similar to the actions taken by our House of Delegates. Our delegates went to the meeting instructed as regards the opinions of their constituents; they attended the reference committee meetings and made their views known; and the final result is good proof that democracy did prevail.

CORRECTION

In the final paragraph of the editorial entitled "Laboratory Diagnosis in Obstetric Hemorrhage," on page 303 of the July, 1954, JOURNAL OF THE IOWA STATE MEDICAL SOCIETY, the first sentence should have read as follows: "Commercially prepared solutions of *fibrinogen* have recently be-

come available and are, of course, the most direct way of restoring the blood-fibrinogen level to normal."

Our inadvertently substituting the word *thromboplastin* for *fibrinogen* in that statement was a serious error indeed, for the injection of thromboplastin could be very dangerous and probably would be fatal. We hope fervently that we misled no one.

HIGHLIGHTS OF AMA HOUSE OF DELEGATES MEETING

June 21-25, 1954, San Francisco

At the AMA meeting in San Francisco, the House of Delegates held sessions on Monday, June 21, Wednesday, June 23, and Thursday, June 24. The delegates considered 77 resolutions and a volume of officer, committee, and subcommittee reports. The resolutions and reports were presented to the members of the House of Delegates on Monday and were immediately referred to the proper reference committees for study. Tuesday, June 22, was devoted to reference committee hearings.

The Iowa State Medical Society had one or more representatives in attendance at each of these reference committee meetings. The assignments to reference committees by Dr. G. V. Caughlan, president of the ISMS, were as follows:

Amendments to the Constitution & By-laws, Dr. R. N. Larimer, Sioux City; Board of Trustees & Secretary, Reports of Hygiene, Public Health & Industrial Health, Dr. G. V. Caughlan, Council Bluffs, Dr. George Braunlich, Davenport (Dr. Braunlich, delegate from Iowa was appointed to serve on this committee by the Speaker of the House); Insurance and Medical Service, Dr. Fred Sternagel, West Des Moines, Mr. Wilbur Quinn, Des Moines; Legislation & Public Relations, Dr. F. C. Coleman, Des Moines, Mr. Edwin Kingery, Des Moines; Medical Education & Hospitals, Dr. J. D. Conner, Nevada, Miss Mary McCord, Des Moines; Medical Military Affairs, Dr. D. C. Conzett, Dubuque, Delegate; Miscellaneous Business, Dr. D. F. Ward, Dubuque, Delegate, Dr. G. V. Caughlan, Council Bluffs; Report of Officers, Dr. F. C. Coleman, Des Moines.

Mr. Donald Taylor was directed by the president to spend time in each reference committee hearing.

The House of Delegates reconvened Wednesday morning, June 23, to consider the reports of these reference committees. The following resolutions are the ones which we felt would be of immediate interest to Iowa physicians.

JOINT BILLING

The Reference Committee on Miscellaneous Business considered a report of the Judicial Council relative to joint or combined bills. This report from the Judicial Council concerned the Iowa

resolution on the elaboration of medical ethics which was introduced into the House of Delegates by Dr. Braunlich of Iowa at the 1953 Clinical Session in St. Louis. At the Clinical Session the Iowa resolution was referred to the Reference Committee on Miscellaneous Business, which recommended to the House that the Iowa resolution be referred to the Judicial Council with the request the factors involved in the matters as presented be investigated to determine whether there were new factors that would cause the Judicial Council to change its opinion as set forth in its report to the House of Delegates at the 1952 Clinical Session concerning the billing of patients. The Judicial Council report which was considered by the Reference Committee on Miscellaneous Business at the San Francisco meeting included the following statements:

The Judicial Council is of the opinion that the only new facet concerning this subject that has come up recently is the case of joint billing to some of the non-profit insurance companies. In many cases these insurance companies insist on a joint or combined bill, but the bill is being paid in most instances by two checks. This is not considered unethical, and all insurance plans which do not pay the individual physician in this manner should be urged to do so.

The Judicial Council is still of the opinion that when two or more physicians actually and in person render service to one patient they should render separate bills.

There are cases, however, where the patient may make a specific request to one of the physicians attending him that one bill be rendered for the entire services. Should this occur, it is considered to be ethical if the physician from whom the bill is requested renders an itemized bill setting forth the services rendered by each physician and the fees charged. The amount of the fee charged should be paid directly to the individual physicians who rendered the services in question.

Under no circumstances shall it be considered ethical for the physician to submit joint bills unless the patient specifically requests it and unless the services were actually rendered by the physicians as set out in the bill.

The reference committee added one paragraph to the original report of the Judicial Council which read as follows:

In addition, the committee wishes to recommend that the House of Delegates resolve that it firmly opposes fee splitting, rebating, or payment of commissions in any guise whatsoever. And that it further opposes any mechanism that encourages this practice.

This report of the Judicial Council, with the added comment of the Reference Committee on Miscellaneous Business, was approved without debate at the final session of the House of Delegates on Thursday.

OSTEOPATHY

The Reference Committee on Medical Education & Hospitals considered four resolutions on osteopathy, as well as the supplemental report of the Board of Trustees which included comments on a report which the Board had received from the Committee for the Study of Relations Between Osteopathy and Medicine. The reference committee recommended no action on the four resolutions, but called for approval of the supplemental report of the Board of Trustees. The following statements are taken from the report of the Board of Trustees on the subject of relations between osteopathy and medicine.

Prior to the Annual Session in 1953, the Committee, as then constituted, conducted an investigation of osteopathy

and rendered a report to the Board of Trustees and the House of Delegates. The report was as factual and accurate as it was possible to make. It has been under consideration for one year. The report has been subjected to criticism which has been both valid and invalid. Under certain circumstances, probably because of lack of information, the recommendations of the report have been misunderstood.

The principal sound criticism of the report is that the Committee was compelled to rely upon indirect evidence concerning the nature and scope of education in osteopathic schools. In the area of the basic sciences, this defect was partially offset by the results of examinations in these subjects in the jurisdictions requiring them. In the clinical fields the material for evaluation was entirely indirect in nature. During the past year the Committee has been furnished with additional information such as the various recognitions of osteopathy at the national level, a list of articles by osteopathic authors published in medical and paramedical journals, and a list of educational institutions which accept osteopathic education in the completion of requirements for baccalaureate degrees. These items, however, are also indirect evidence.

The functions of the Committee are to study the relations between osteopathy and medicine and to suggest methods of improving those relations when possible. The Committee believes both functions to be important. Significant improvement in the relations between the two professions is dependent upon action which would make doctors of medicine available as teachers in schools of osteopathy and which would permit the state medical associations faced by dissimilar conditions to determine the relationship of their members to the osteopathic profession within the respective states.

The justification or lack of justification of the "cultist" appellation of modern osteopathic education could be settled with finality and to the satisfaction of most fair-minded individuals by direct on-campus observation and study of osteopathic schools. The Committee, therefore, proposed to the Conference Committee of the American Osteopathic Association that it obtain permission for the Committee for the Study of Relations Between Osteopathy and Medicine to visit schools of osteopathy for this purpose.

It was agreed that each school would be visited by two members of the Committee accompanied by an individual of established experience in inspection of medical schools. The studies would be of sufficient duration, breadth and depth to establish the nature and scope of the educational program and determine the quality of medical education provided.

The Conference Committee favorably recommended this proposal to the Board of Trustees of the American Osteopathic Association, which considered it at a special meeting on February 6-7, 1954. It has referred the question to its House of Delegates, which will act upon the proposal in July 1954. If the action of the House of Delegates of the American Osteopathic Association be favorable, the on-campus observations can be carried out in the fall of this year.

The Committee is of the opinion that no constructive purpose would be served by further meetings with the Conference Committee of the American Osteopathic Association unless such meetings were devoted to the development of mechanisms for acquisition of direct information concerning the nature, scope and quality of education in schools of osteopathy.

The Committee therefore recommends:

1. That no action be taken on the report at this time and that final action be deferred until December 1954,
2. That the Committee be continued until December 1954 in order to be available to evaluate education in schools of osteopathy should the House of Delegates of the American Osteopathic Association act favorably upon the recommendation of its Conference Committee.

The AMA House of Delegates, following the recommendation of the Reference Committee on Medical Education & Hospitals, approved the Supplemental report of the Board of Trustees.

VETERANS' MEDICAL CARE

The Reference Committee on Insurance & Medical Service considered a supplemental report of the Board of Trustees on the AMA policy on veterans' medicine. The statement of the Board of Trustees, which was approved by the House of Delegates, follows:

The Board of Trustees, following the meeting of the House of Delegates last June, delegated the responsibility for conducting the informational program with respect to the policy of the American Medical Association on veterans' medicine to the Council on Medical Service, which, in turn, referred the program to its Committee on Federal Medical

Services for implementation. The Board wishes to recognize the effective program that this Committee has conducted since that time in its regional conferences and its planning for the future. The Board is not unaware of the fact that a few states have seen fit to adopt resolutions which conflict in varying degrees with the AMA policy. It wishes to take this opportunity, therefore, to strongly urge that the vigorous, unequivocal and reasonable policy enunciated by the House of Delegates in June, 1953, on recommendation of the Board of Trustees, be reaffirmed. It is the opinion of the Board that withdrawal from this firm policy at this time would vitiate all of the good that has been achieved and destroy the fine program that the Committee on Federal Medical Services of the Council on Medical Service has been conducting.

CLOSED-PANEL PLANS

The much publicized New York resolution calling for several changes in the Principles of Medical Ethics relative to participation in closed-panel medical-care plans, was considered by the Reference Committee on Miscellaneous Business. That committee made the following recommendation, which was adopted by the House:

In the discussion before your reference committee on this resolution, it became apparent to the committee that clarification and interpretation of the Principles of Medical Ethics in relation to prepaid medical care plans are desirable. As set forth in the bylaws, the Judicial Council has jurisdiction on all questions of medical ethics.

Therefore, your reference committee recommends that the House of Delegates request the Judicial Council to . . . investigate the relations of physicians to prepaid medical care plans and render such interpretations of the Principles of Medical Ethics as the Council deems necessary, and report to the House of Delegates not later than the next annual meeting of the Association.

The committee further recommends that the New York resolution be referred to the Judicial Council for consideration in connection with this investigation.

The New York resolution, among other suggested changes, would add the following new paragraph to Chapter I, Sec. 4, "Advertising," of the Principles of Medical Ethics:

It should be understood that any medical care plan, company, or organization which advertises for subscribers and directs such subscribers to a restricted panel of physicians for medical care is advertising for the benefit of the physicians involved.

FOREIGN MEDICAL GRADUATES

Three resolutions and a Board of Trustees' supplementary report were submitted to the House regarding the evaluation of foreign medical school graduates, a subject which attracted major interest earlier this year at the annual Congress on Medical Education and Licensure, in Chicago. The Reference Committee on Medical Education & Hospitals spent much of its time listening to the ideas and proposals of various state medical societies, state licensing boards, members of the Council on Medical Education & Hospitals and others. The reference committee's recommendation was as follows: "The intent and aims of this Supplementary Report and the three resolutions can best be met by referring the entire problem to the Council on Medical Education and Hospitals for further

study. It is recommended that the Council report at the Interim Session in 1954 regarding the progress relative to this study." The House adopted the reference committee's recommendations.

SEAL OF ACCEPTANCE

The Council on Medical Service presented a supplementary report outlining the difficulties encountered in conducting the Seal of Acceptance program, and recommending discontinuance of the Seal of Acceptance for voluntary health insurance plans. The report said that the standards and principles of the program will be maintained as guides and recommendations for all groups operating or establishing plans. The House, on recommendation of the Reference Committee on Insurance and Medical Service, adopted the Council report, thus terminating the Seal of Acceptance program for voluntary health insurance plans.

REGISTRATION OF HOSPITALS

The House also approved a Board of Trustees report calling for discontinuation of the registration of hospitals by the Council on Medical Education and Hospitals and suggesting that the Joint Commission on the Accreditation of Hospitals be requested to undertake the registration of hospitals in addition to its present accreditation activities.

AWARDS AND CITATIONS

The AMA presented its Distinguished Service Award to Dr. William Wayne Babcock, Philadelphia, Pa. Dr. Babcock received 91 of 176 votes. Three candidates were nominated for the honor by the AMA Board of Trustees from a list of nominees suggested by state medical societies. The other men were Dr. Howard T. Karsner, Washington, D. C., and Dr. Torald H. Sollman, Cleveland Heights, Ohio. Dr. Babcock was named for the 1954 award for outstanding contributions to medicine and humanity. He was professor of surgery and clinical surgery at Temple University and has had a long and varied medical career.

Dr. Nicholas P. Dallis, Toledo, a practicing physician who is co-author of the comic strip "Rex Morgan, M.D." received a special citation from the AMA. It was presented by Dr. Edward J. McCormick in recognition of his outstanding health-education service in producing "Rex Morgan, M.D."

In the closing session of the House of Delegates on Thursday, Dr. Walter Martin presented a special citation to Smith, Kline & French Laboratories, Philadelphia, for "pioneering use of television in bettering the health of the nation."

Also at the final meeting of the House, the California Medical Association presented a check for \$100,000 to the AMA Education Foundation. Simultaneously, the Woman's Auxiliary to the California Medical Association presented \$5,500 to the AMA fund.

Plan to attend the Iowa State Medical Society's Annual Meeting, April 24-27, 1954, in Des Moines.

ELECTION OF OFFICERS

Dr. Elmer Hess, Erie, Pennsylvania, was chosen president-elect. Other nominees for the office of president were Dr. Harvey B. Stone, Baltimore, and Dr. Edwin S. Hamilton, Kankakee, Illinois. The vice-president elected was Dr. Clark Bailey, Harlan, Kentucky. Dr. McKinnie Phelps, Denver, was the unsuccessful candidate for the office of vice president. Dr. David B. Allman, Atlantic City, and Dr. F. J. L. Blasingame, Wharton, Texas, were re-elected trustees. Other officers chosen included: Secretary, Dr. George F. Lull, Chicago; Treasurer, Dr. Josiah J. Moore, Chicago; Speaker of the House, Dr. James R. Reuling, Bayside, New York; and Vice Speaker, Dr. E. Vincent Askey, Los Angeles. Dr. J. Morrison Hutcheson, Richmond, Virginia, was appointed to the Judicial Council to fill the place of Dr. Edward R. Cuncliffe, New York. Dr. Cuncliffe, who had served for many years as chairman of the Judicial Council, will be succeeded as chairman by Dr. Homer Pearson, Miami.

The House of Delegates chose New York City as the place for the 1957 annual meeting, San Francisco for 1958, and Atlantic City for 1959. Previously selected were Atlantic City for 1955, and Chicago for 1956. The dates of next year's meeting in Atlantic City are June 6-10.

The final registration total for the San Francisco meeting was expected to reach approximately 35,000, including more than 12,000 physicians.

Complete proceedings of the House of Delegates meetings will appear in an early issue of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. We gratefully acknowledge the assistance of Dr. George Lull's office in supplying parts of the material included in this brief summary.

GEORGE BRAUNLICH, M.D., Davenport
D. C. CONZETT, M.D., Dubuque
D. F. WARD, M.D., Dubuque

UNDERWRITERS STUDY HEALTH-INSURANCE EXTENSION

A permanent, long-range program to study and assist in developing methods for further extending and improving health care and health insurance protection for the public has been adopted by the newly-formed Joint Committee on Health Insurance.

Composed of prominent insurance company officers representing seven insurance associations, the committee named as its chairman E. J. Faulkner, president of Woodman Accident Co., Lincoln, Nebr. J. F. Follmann, general manager of the Bureau of Accident and Health Underwriters, is secretary.

Among the initial suggestions to be considered in carrying out the program are:

1. Studies of methods to stimulate the expansion of health insurance, including evaluation of the possible need for establishing a program supported by the insurance business to provide health reinsurance.

2. General recommendations from the viewpoint of the nation as a whole as to the most effective over-all program for dealing with health-care costs, based primarily on voluntary insurance methods. The program would also embrace suggestions for handling most of the medically indigent and uninsurable, with special reference to the aged; recognition of loss of income as well as direct expense as a part of health costs; and studies of the most effective balancing of insurance with other methods of meeting the different types of health costs, including self-insurance.

3. Further improvement of the services provided by the insurance companies and consideration of steps the companies and their trade associations can undertake, alone and with the aid of state insurance commissioners, in achieving improvements, including the possibility of establishing codes of minimum insurance standards.

4. An effective program of public education in the use of health insurance.

In developing the new program, cooperation will be sought from the National Association of Insurance Commissioners, the medical profession, the hospitals and other health insurance organizations and groups.

One of the early basic objectives of the entire program will be that of defining with greater exactness the role voluntary health insurance can play in helping to meet the whole problem of public health. The committee pointed out that approximately 100,000,000 people in the United States presently have some form of health insurance. The insurance companies now offer protection for hospitalization, surgical expense, illness and the cost of major medical expense, and loss of income resulting from illness, it was asserted.

WILL REPORT FINDINGS

The program will be carried out through a number of task forces assigned to each of the various pending projects and such other projects as may be developed as a result of the committee's health studies in the future. The task forces will report their findings and recommendations to the committee for approval or modification.

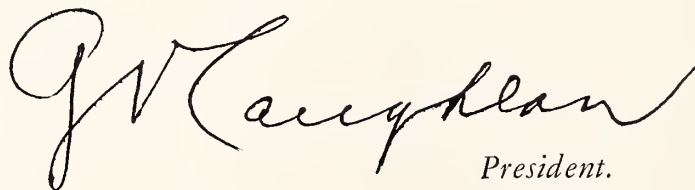
When the recently established committee was organized, its purposes were defined as the study of health insurance practices, major legislation related to this type of insurance, and the encouragement of research in the health insurance field. Almost all insurance companies providing this type of coverage are represented in the seven associations which will receive recommendations from the committee.—JOURNAL OF COMMERCE, May 5, 1954.

President's Page

The Iowa resolution to allow the presentation of joint bills for professional services, which was introduced at the December, 1953, meeting of the House of Delegates of the American Medical Association, 'was referred at that time to the Judicial Council for consideration and opinion. At the San Francisco meeting, the Council ruled that a joint bill may be rendered to an insurance company or to a private patient on the company's or the individual's specific request. It also ruled that payment should be made by separate checks to each physician.

This report was referred to a reference committee, which approved it, but when it was presented to the House of Delegates, considerable debate took place and it was re-referred to the committee. Once again the committee approved the report, adding another paragraph condemning fee splitting, and it was then adopted unanimously by the House of Delegates with the added paragraph.

This constitutes a clear vindication of the Iowa code of ethics that has been under fire by the American College of Surgeons. It allows consideration in the fee settlement to the doctor in the field who recognizes a serious condition and advises and assists in the proper treatment.

A handwritten signature in cursive script, reading "J. W. Laughlan". The signature is fluid and elegant, with a large initial "J" and a long, sweeping underline.

President.

Iowa Academy of General Practice

President—Paul F. Chesnut, M.D., Winterset

President-Elect—Frank D. McCarthy, M.D., Sioux City

Vice-President—Dean C. Snyder, M.D., DeWitt

Secretary-Treasurer—William M. Sproul, M.D., 912 Equitable Bldg., Des Moines

Executive Secretary—Mrs. Elizabeth Nelson, 3600 Franklin, Des Moines

POST-GRADUATE PROGRAMS

The time is not far away when the post-graduate courses for the next fall and winter will begin. Our Iowa Academy is sponsoring its regular three meetings, as usual, and co-sponsoring a fourth one. The three regular programs are chosen by our Committee on Scientific Assembly, and the speakers are arranged for by us. Wyeth Laboratories has participated by underwriting the costs to the Iowa Academy. This substantial help has made it possible to present the excellent programs which have always been so well attended.

The fourth program of the coming winter and spring is different. We have chosen the general and specific subjects, but from there on, all we shall have to do is to provide men to preside over the various sessions. The Lederle Laboratories makes all the arrangements and in addition, provides the luncheon, the ladies' entertainment, and a cocktail party for the attending physicians and their wives.

The plans for our annual meeting September 22 and 23 are near completion. The complete program will be presented on this page next month. Through the efforts of one of our members, we will have an unusually interesting speaker for the second day luncheon in the person of Countess Pulaski, a former Russian spy, who will tell us some of the spine-chilling and blood-curdling details of her experiences working for "Uncle Joe" Stalin. This will give us some variety from our scientific program of the day. So watch for details. The dates and places are:

September 22 and 23, 1954

Hotel Savery, Des Moines

November 4, 1954

Hotel Montrose, Cedar Rapids

January 20, 1955

Iowa Methodist Hospital, Des Moines

May 19, 1955

Hotel Savery, Des Moines

STUDY REPORTS

The one factor which makes the A.A.G.P. outstanding among medical organizations is its study

requirements for active membership. This imposes some duties on us to retain membership, but no one can deny that we are better general practitioners for our efforts.

Only one thing more is necessary, and that is to get in the reports on the work we have done. *Please* get yours in if you have not already done so. You forget if you allow too much time to elapse. *Do it today!*

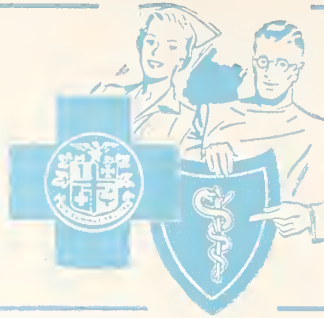
GENERAL PRACTITIONERS IN ORGANIZED MEDICINE

There are approximately 1,200 general practitioners in Iowa. It stands to reason that such a group should be adequately represented in the councils of organized medicine in the state, but for some reason that is not the case. Along with being a good family physician, the G.P. should also have some responsibilities in the handling of the many problems facing us as medical doctors. It is not enough to sit back and complain about or to criticize the way things are going, and drop matters at that point. The opinions of every man practicing medicine are important and should be heard somewhere along the long line of highly organized medicine, local, county, or state. Taking good care of patients is not enough of a contribution to medicine as a whole. The words of the President of the American Can Company are true: "America cannot afford to have one poorly trained doctor." But it is just as true that we cannot afford to have very many men who think they are too busy to have an interest in their own destiny and the destiny of the profession as a whole in time to come.

We cannot all see eye to eye on every problem and, according to American democratic ideology, the presentation of all aspects of any problem leads to a better solution, acceptable to the largest possible number of the people involved. In these days of serious problems threatening the high quality of medical care provided by American doctors of medicine, we cannot afford to make mistakes as an organization. Our interest is in the welfare of our patients, notwithstanding all assertions to the contrary. We cannot allow politicians, do-gooders, or anyone else to deflect us from that primary purpose. So all minds in medicine must be welded together and all must under-

(Continued on page 400)

BLUE CROSS



BLUE SHIELD

FROM: Blue Shield

TO: Doctor and His Secretary

SUBJECT: Suggestions for Making Blue Shield More Efficient and Accurate in Payment of Claims

As might be expected, most of the contacts between the doctor and Blue Shield are handled by mail. A piece of paper (called Doctor's Service Report) goes to Blue Shield for determination of liability.

This piece of paper is meaningless unless information is shown thereon (either typed or penned) that will be helpful to those doctors and others who extract information for sufficient evidence to establish a case. You as a doctor performing the professional service, know all of the details of the case, type of service, patient's clinical history, etc., but the people in the Blue Shield office possess no more than the information you have forwarded on the piece of paper.

You can be extremely helpful by providing:

1. Correct spelling of names
2. Latest group, code and certificate numbers
3. Legible doctor's name (preferably typed)
4. Doctor's code number on Doctor's Service Report
5. Nomenclature as shown in Schedule, wherever possible
6. Complete information on accident cases, number of sutures, area involved, date of accident
7. Where services were rendered—home, office, hospital inpatient or outpatient
8. Date of admission to and discharge from hospital, for surgical cases as well as medical
9. Prompt submission of Doctor's Service Report. Payment can then be expedited to all doctors involved in the case
10. Your total charge to the patient for services reported

By observing these ten points you can help make all work prompt and efficient. The patient will be better satisfied.

Every effort is being made to keep Blue Shield claim reporting simple. Plans are universally commended on their simplicity of reporting. We in the Blue Shield office keenly realize our need for continuing understanding, guidance and assistance from the sponsoring profession if we are to fulfill faithfully our responsibility for conducting your Plan efficiently, ethically and in the public interest.

You are of immeasurable assistance in maintaining these high standards. Thank you.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

- THE TREATMENT OF THE ALCOHOLIC, by *Fritz Kant*, M.D. (Springfield, Illinois, Charles C Thomas, 1954. \$3.50).
- MANUAL OF PROCTOLOGY, by *Emil Cranet*, M.D. (Chicago, The Year Book Publishers, Inc., 1954. \$7.50).
- PRACTICAL FLUID THERAPY IN PEDIATRICS, by *Fontaine S. Hill*, M.D. (Philadelphia, W. B. Saunders Co., 1954. \$6.00).
- NEW AND NONOFFICIAL REMEDIES (ISSUED UNDER THE DIRECTION AND SUPERVISION OF THE COUNCIL ON PHARMACY AND CHEMISTRY—AMERICAN MEDICAL ASSOCIATION 1954. (Philadelphia, J. B. Lippincott Co., 1954. \$2.65).
- FUNDAMENTALS OF ANESTHESIA, PREPARED UNDER THE EDITORIAL DIRECTION OF THE CONSULTANT COMMITTEE FOR REVISION OF FUNDAMENTALS OF ANESTHESIA, A PUBLICATION OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. Third Edition. (Philadelphia, W. B. Saunders Co., 1954. \$6.60).
- ANESTHESIA IN GENERAL PRACTICE, by *Stuart C. Cullen*, M.D. (Chicago, The Year Book Publishers, Inc., 1954. \$5.00).
- PERIPHERAL CIRCULATION IN MAN (A CIBA FOUNDATION SYMPOSIUM) Ed. by *G. E. W. Wolstenholme*, O.B.E., M.A., M.B., B.Ch., and *Jessie S. Freeman*, M.B., B.S., D.P.H. (Boston, Little Brown & Co., 1954. \$6.00).
- HEART DISEASE AND INDUSTRY, by *Meyer Texon*, M.D. (New York, Grune & Stratton, 1954. \$7.50).
- ARTHRITIS AND RHEUMATISM, THE DISEASES AND THEIR TREATMENT, by *Charles L. Steinberg*, M.D., and five collaborators. (New York, Springer, 1954. \$10.00).

BOOK REVIEWS

- RECENT ADVANCES IN CARDIOVASCULAR PHYSIOLOGY AND SURGERY (Minneapolis, University of Minnesota, 1954. \$1.00).

This paper-bound pamphlet is reprinted from the January, February and March, 1954, issues of MINNESOTA MEDICINE. It represents the proceedings of a symposium presented at the University of Minnesota under the joint sponsorship of that institution and of the Minnesota Heart Association in September, 1953. The list of authors reads like a who's who in modern cardiology and cardiovascular physiology.

Beginning with basic studies on the chemical and molecular processes of heart-muscle contractility, the discussion ranges through the mechanisms for regulation of the circulation, measurements of pressure and flow, and differential diagnosis of cardiac defects by physiologic means, including catheterization, angiocardigraphy, and indicator dilution curves. Following these papers on fundamental mechanisms, the symposium was devoted to recent advances in the surgical treatment of heart disease. The leading investigative centers in Sweden, Germany and the United States were represented among the authors on the program.

So rapidly is progress being made in these various fields, that textbooks are out of date almost before they are printed. The publication of symposium proceedings such as this one is accordingly very much worth while. To one who attended the Minneapolis symposium, as did this reviewer, the printed proceedings fail to transmit the warmth and air of excitement which pervaded some of these presentations. The booklet is nevertheless very much worth reading by anyone interested in this rapidly expanding speciality.—*Herman J. Smith*, M.D.

- 1953-54 YEAR BOOK OF ENDOCRINOLOGY (Chicago, Year Book Publishers, Inc. \$6.00).

Endocrinology has undergone a tremendous increase in general appeal and interest since the introduction of cortisone and corticotrophin. The practitioner is hard pressed to keep abreast of the advancements in this field, partly because the literature is flooded with speculative articles that confuse us.

The Yearbook series acts as a clearing house of the massive writing on this subject, enabling one to obtain a concise knowledge of endocrine progress in a couple evenings of reading. This issue follows the pattern of all these books, presenting the subject in an orderly fashion, one gland at a time, with correlating introductory remarks at the beginning of each chapter.

A study of this annual review is worth any physician's time, especially that of one who is practicing general medicine, internal medicine, pediatrics, or gynecology.—*Arthur G. Lueck*, M.D.

- REVIEW OF PHYSIOLOGICAL CHEMISTRY, by *Harold A. Harper*, Ph.D.; Fourth Edition (Los Altos, Calif., Lange Medical Publications, University Medical Publishers, 1953. \$4.00).

Though the scope of biochemistry is enlarging as rapidly today as many other fields of scientific endeavor, we practitioners hardly realize it in our preoccupation with daily concern for our patients. And yet, biochemistry is the foundation of all body phenomena, and we would do well to reacquaint ourselves with its fundamentals.

The monograph here described is a succinct review of the basic facts of biochemistry, pared of all the trimmings of the usual text. It is directed to the medical student, and to the intern or resident taking his state or specialty boards. In it are many large diagrams of the structure of various substances, and of chemical processes and "cycles" occurring in the body. Short descriptions, admirably outlined with important words strongly underlined, add to the informativeness of the charts and tables which are sprinkled profusely through the book.

The review, then, is excellently conceived and contains nothing but "meat." We must face the fact that if we are to practice intelligent medicine, we must have some knowledge of body structure and function "beyond the microscope."—*Daniel A. Glomset*, M.D.

- MODERN CLINICAL PSYCHIATRY, by *Arthur P. Noyes*, M.D., Fourth Edition (Philadelphia, W. B. Saunders & Co., 1953. \$7.00).

Dr. Arthur P. Noyes has been one of our outstanding psychiatrists for many years, particularly in the field of administrative psychiatry. The previous editions of his book have all been outstanding, and the fourth edition lives up to the standards reached by the previous editions.

In this edition, the author has attempted to place increased emphasis on psychological influences and motivation in the production of personality disorders, and at the same time has kept in mind that disordered

personality is the resultant of many complex and in-neracting forces.

This is one of the better textbooks on basic psychiatry. The first five chapters discuss psychiatry and "the mind," the development of dynamic psychiatry, personality development, the mental mechanisms involved and their functions, and finally, the cause and nature of mental disorders. The next two chapters deal with symptoms of mental disorders and the actual examination of the patient. Chapters eight through thirty-two deal with the recognized types of mental disturbances, with complete descriptions of their symptomatology and course. There is, in addition, a chapter on drug addiction and a chapter on child psychiatry. The last two chapters of the book are devoted to shock and other physiotherapies, and to psychotherapy.

Dr. Noyes has attempted to bring out the various concepts accepted in psychiatry at the present time and to integrate them into the discussions of the various types of illness. This is basically a textbook and certainly would be valuable to all students and of great interest to general practitioners who are interested in learning something of the psychiatric disorders without being confronted with a maze of psychiatric terminology. The descriptions of illnesses and explanations are simply written and very understandable. Diagnostic nomenclature used throughout the text is that recently adapted by the American Psychiatric Association to bring the individual disease entities into accord with present concepts concerning personality disturbance.—*Herbert C. Merillat, M.D.*

FIFTY YEARS OF MEDICINE, by *Lord Horder* (New York, Philosophical Library Inc., 1954. \$2.50).

This interesting monograph is an expanded version of three Harden lectures delivered in December, 1952, at the Royal Institute of Public Health and Hygiene, London. The titles are: I. The Birth of Scientific Medicine; II. Medicine Enlarges Its Boundaries; and III. The Present and the Future.

To a certain extent, the presentation is autobiographical and reflects the medical life of the author during the past 50 years. The first lecture is concerned with the remarkable evolution of medical thought at the turn of the century, largely due to the advent of bacteriology, the birth of clinical pathology, the advances in surgery, the study of endocrinology, with the modern trend towards social (preventive) medicine, and psychosomatic medicine.

Under "Enlarged Boundaries" he refers to the "nutritional factor" in many diseases, the extension into physical medicine and rehabilitation, industrial medicine, and the ancillary role of nursing in modern medicine.

The third lecture, "The Present and the Future," discusses at some length the "New Diseases for the Old" as well as the problems of an aging population. The section on "Medicine and the State" will be interesting reading for all American physicians, for it presents the distinctive viewpoint of a man who has served as chairman of the "Fellowship for Freedom in Medicine" and championed the continued opposition to the British National Health Service Act. At the close is a brief discussion on eugenics and a prophetic forecast of the future of medicine.

This rare volume will attract both doctor and layman—the spirit of modern medicine as portrayed by a distinguished English physician and medical statesman.—*W. L. Bierring, M.D.*

ENDEMIC GOITER, by *John B. Stanbury, M.D., Gordon L. Brownell, Ph.D., Douglas S. Riggs, M.D., Hector Perinetti, M.D., Juan Itoiz, Ph.D., and Enrique B. DelCastillo, M.D.* (Cambridge, Mass., Harvard University Press, June 4, 1954. \$4.00).

This monograph presents a detailed account of a thorough scientific study of goitrous individuals in an iodine-deficient area in Argentina. The work was carried out by an expedition from the Massachusetts General Hospital, in Boston.

The team performed iodine uptake tests in the patients and found that the iodine-deficient goiter clears iodide from the blood more rapidly than does the thyroid gland of a patient abundantly supplied with iodine. The administration of desiccated thyroid reduces the uptake, presumably by suppressing thyrotropic stimulation by the pituitary gland.

As a result of the studies, there seems little doubt that iodine deficiency can cause endemic goiter. The monograph makes interesting reading; the work was conducted in a most scientific manner.—*Arthur G. Lueck, M.D.*

THE HISTORY OF MEDICINE OF POLK COUNTY, IOWA (Commemorating the centenary of the Polk County Medical Society.) (Des Moines, Polk County Medical Society, 1954. \$4.00).

This volume is a compilation of a series of articles previously published in the Bulletin of the Polk County Medical Society, commemorating the centenary of the organization. The committee which prepared this history, headed by Dr. Walter L. Bierring, is to be congratulated for its excellence. Certainly every member of the Polk County Society will wish one of these books for his library, and undoubtedly many members of the State Society who practice outside of Des Moines will want copies for the same purpose.—*E. M. George, M.D.*

General Practitioners in Organized Medicine

(Continued from page 397)

stand correctly and clearly why organized medicine reaches its decisions. On the other hand, there have been numerous instances where the considered opinion of a minority has finally appealed to the majority. Right is right.

In the state there are large numbers of clear-thinking, intelligent general practitioners who should be taking an active part in medical organization decisions. The logical place to take this active part is in the local medical society. This is grass-roots from whence all decisions should spring. The local medical society should receive the support of every G.P. in the state, and the opinions and problems of that group should then be carried to the state organization and thence to the AMA.

Offer your services to your county society. If appointed to a committee, see that you help the committee to the best of your ability. Only in that way will organized medicine truly represent the opinion of Iowa doctors and will its decisions be freest from error.

You have a voice—why not use it?

You have a duty—why not perform it?

STATE DEPARTMENT OF HEALTH

Edmund G. Zimmerman
COMMISSIONER

TICK SEASON AND HUMAN DISEASE

The tick season arrives in Iowa with the warm sunny days of late April and early May and continues until the first frosts of early fall. Ticks are of public health significance for at least a couple of reasons. They may be carriers of diseases such as Rocky Mountain Spotted Fever and Tularemia to which people are susceptible. Also, tick bites irritating enough in themselves as an aftermath of a day's outing in wooded areas, frequently become infected with pus-forming organisms which produce local abscesses.

The ticks found in Iowa^{1, 2} are the common American dog ticks (*Dermacentor variabilis*). Sometimes they are called wood ticks because they are usually found on grass, weeds, or shrubs along paths and roadways through wooded or brushy areas. Many ticks have been reported in some areas of Iowa in recent years. The adult unfed tick is brownish in color, about 3/16 inch in length, somewhat pear shaped, and has four pairs of legs. When the female is filled with blood it is bluish grey in color and may be 1/2 inch long.

When a person comes in contact with tick infested vegetation, the ticks crawl onto the person. They cannot fly or jump. The tick attaches itself to the skin of the host and begin to suck blood. During this feeding process, an infected tick may transmit the disease to the human host.

Dogs that run outdoors may become infested with ticks and bring ticks into the home in this way.

Although most ticks are harmless, it is wise to treat each one as though it might be infected. Usually an infected tick does not transmit the germs of infection until it has been attached to the person for several hours. This gives time to discover the tick and remove it before infection takes place. The wearing of boots, leggings, or socks outside the trouser bottoms helps to prevent ticks from becoming attached to the skin. Everyone whose activities take him into tick-infested areas, should examine himself two or three times a day.

Children playing out of doors where there are ticks should be inspected twice a day from head to toe. If these procedures are followed, ticks can usually be located and removed before they cause human disease. Keeping grass and other vegetation cut short along roadways and paths, and about cabins and buildings close to wooded areas, helps to keep down the tick population.

Do not crush a tick in removing it. A tick that is engorged with blood is easily crushed and if smeared on your skin, can infect you. Take it off with tweezers or wear rubber gloves. Usually a gentle steady pull is best. A previous application of the still hot end of a burned match or a lighted cigarette will cause the tick to withdraw its hooked-lip and thereby facilitate the removal. Ticks that have been removed should be destroyed by burning. The tick bite should be painted with iodine.

While the number of cases of Rocky Mountain Spotted Fever and Tularemia in Iowa have been very low in recent years, the fact that there are some cases indicates there is a reservoir of infection in nature. Thus precautionary measures are advisable.



Adult, male, common dog tick (wood tick) found in Iowa (about five times natural size).

1. Jordan, Carl F., Rocky Mountain Spotted Fever and Tick Survey in Iowa. A.J.P.H. 28:1411 (December) 1938.

2. Cooley, R. A., The Genera *Dermacentor* and *Otocentor* (Ixodidae) in the United States. National Institute of Health Bulletin No. 171. 1938.

MORBIDITY REPORT

Diseases	June 1954	May 1954	June 1953	Most cases from these counties
Diphtheria	0	0	0	.....
Actinomycosis	2	..	..	Hamilton, Muscatine
Encephalitis	4	0	0	Linn 2, Scott 2
Scarlet Fever	125	177	38	Polk, Scott, Wapello
Typhoid Fever	1	1	2	Polk
Smallpox	0	0	0	.....
Measles	2,627	3,520	1,620	Palo Alto, Pottawattamie, Scott
Whooping Cough	26	22	9	Cerro Gordo, Des Moines, Monona
Brucellosis	23	26	35	Benton, Clinton, Des Moines 2 each; others scattered, 1 to a county
Chickenpox	413	918	361	Dubuque, Linn, Scott, Wapello
Meningococcus Meningitis	7	6	1	Clayton, Linn, Potta., Woodbury 1 each; Polk 3 cases
Mumps	980	1,396	510	Polk, Pottawattamie, Wapello
Poliomyelitis	26	5	21	Guthrie 2, Polk 4, Potta. 2, Webster 3; others 1 to a county: 3 Paralytic, 12 non-paralytic, 11 un- specified
Psittacosis	7	0	0	Cerro Gordo 2, Mahaska 1, Polk 1, Wapello 3
Infectious Hepatitis	325	527	134	Buena Vista, Cerro Gordo, Green, Sac
Rabies in Animals	35	47	17	Cedar 3, Wright 4, others 2 or 1 to a county, scattered
Rocky Mountain Spotted Fever	1	..	..	Des Moines County
Tuberculosis	46	102	41	For the state
Syphilis	104	165	176	For the state
Gonorrhea	47	74	59	For the state

ANTIBIOTIC PROPHYLAXIS IN CHRONIC DISEASES

Respiratory infections frequently precipitate heart failure in elderly patients. Congestive heart-failure cases are similarly endangered. Thus, McVay and associates at the University of Tennessee undertook an investigation in an effort to discover the practicality of long-term administration of a chemotherapeutic agent in those sorts of patients.

They chose chlortetracycline (Lederle's Aureomycin) with the methyl and propyl esters of parahydroxybenzoic acid added—this latter ingredient having the property of controlling overgrowth of *Candida albicans*. The dose employed was 250 mg. of chlortetracycline twice a day—thirty minutes to one hour before breakfast and again two hours after the evening meal. Controls were given apparently identical placebo capsules.

In the category of chronic congestive heart failure, 73 patients received chlortetracycline and 76 received the placebo, for an average period of 20 months. In the diabetes mellitus category, there were 94 patients in the chlortetracycline group and 95 controls, with an average observation period of 19.5 months.

Results were significantly good in both categories, as indicated by a decrease in the frequency of respiratory infections in the chlortetracycline-treated patients. Among the diabetics, there were reductions in the incidence of (1) respiratory infections, (2) urinary infections, (3) positive cultures obtained in random catheterized urine

specimens and (4) number of hospitalizations. In both groups, more patients felt subjectively improved as a result of taking chlortetracycline than as a result of taking placebo. Side effects of the drug were not a problem, and there were no toxic effects upon bone marrow or liver function.

—G-P, vol. ix, no. 6 (June), 1954, p. 31.
(cf. AM. J. MED. SC., Nov., 1953, and
ANN. INT. MED., Feb., 1954.)

VACCINE EVALUATION NEEDS DOCTOR'S HELP

More than 600,000 children have completed three inoculations, in the field test of the trial polio vaccine developed by Dr. Jonas E. Salk of the University of Pittsburgh. The emphasis now shifts to the evaluation study under the direction of Dr. Thomas Francis, Jr., University of Michigan School of Public Health. The validity of the evaluation is dependent upon data gathered on poliomyelitis cases in the test groups, *including those children in the first three grades who did not get vaccine.*

In addition, data on cases among family members of participating children are an integral part of the study. Since the number of poliomyelitis cases among the test groups may not be large, it is essential that all cases are completely reported. Early diagnosis, prompt reporting and follow-up, and the securing of *necessary epidemiological information and laboratory specimens* are important factors in the evaluation.

An outline of procedures and copies of necessary forms have been sent to local and state health authorities. It is important that physicians in areas where vaccinations were *not* given, cooperate in the study by notifying local or state health officers of cases occurring among children who participated in the trials and then migrated to another area and children who go to summer camps. Local health officials also need information on participating children who receive injections of Gamma Globulin.

This phase of the study will depend, to a large degree, on the wholehearted cooperation of practicing physicians.

Help your central office to maintain an accurate mailing list. Send your change of address promptly to the Journal, 529-36th Street, Des Moines 12, Iowa.

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. LESTER R. HEGG, Rock Valley

President-Elect—MRS. CHARLES H. FLYNN, 709 W. 15th Street, Clarinda

Secretary—MRS. ROBERT P. MASON, 5818 Chamberlain Drive, Des Moines 12

Treasurer—MRS. HOWARD H. SMEAD, 3333 Grand Avenue, Des Moines 12

THE IOWA SCHOOL FOR PRACTICAL NURSING

1. When will the next class be admitted to the Iowa School for Practical Nursing?

September, 1954.

2. Who will be eligible for admission?

Women and men over 18 years of age who are interested in this field and have a liking for people and have good health.

3. What other qualifications must I have?

a. If you are between 18 and 25, and have a high school education.

b. If you are older than 25 years of age, and have a tenth grade education.

4. How do I apply for admission?

a. Fill out both copies of the application form and return *both* to the Registrar, State University of Iowa, Iowa City, Iowa.

b. Also send to the Registrar, a copy of your birth certificate. (Do not send your original birth certificate; if you are enrolled it will not be returned to you. Have a photostatic copy made or obtain a certified copy of the record of your birth from the clerk of the county in which you were born.)

c. Write to your high school principal requesting that a copy of your high school record be sent to the Registrar at the State University of Iowa. If you have attended college, a transcript of your college work must also be sent.

5. Where will I live when I am enrolled?

In one of the University dormitories or other approved housing facilities. You may also live in your own home if you are a resident of Iowa City or live near enough to commute to and from Iowa City.

6. Is practical experience included in the course?

Yes. After the fourth week, the student begins supervised practice in the University Hospitals. After twelve weeks in the school, students are assigned to twenty (20) hours of supervised practice. In addition to this, she may also be employed twenty (20) hours per week. (See question 8 below.)

7. How much will the Practical Nurse course cost?

FEEES

1. First semester	\$37.50
Second semester	37.50
Third semester (Summer session)	18.50
2. Uniforms	39.65
3. Books	12.00
4. Room and Board (for 11 months)	550.00 (approx.)

Note: Personal expenses are not included in the above. First semester fees, uniforms and books will be required at the beginning of the course. Room and board is paid monthly in advance.

8. Will I have a chance to earn part of my expenses while I am in School?

Yes. After the first twelve (12) weeks, your schedule will include twenty (20) hours of practice and five (5) hours of classes. This will enable you to be employed twenty (20) hours per week. Employment, at the rate of \$75.00 per month for half-time work, will be available at the University Hospitals. Other employment may be accepted with approval of the faculty. A student will be able to work eight months, and her earnings during this time should cover the cost of room and board.

9. Will I need to take pre-admission tests?

Yes. Because applicants for the School of Practical Nursing have varied educational backgrounds, tests are necessary for selection and are helpful in the guidance of the students. The applicant is tested in reading, arithmetic and practical judgment. The tests take approximately four (4) hours and are given at the University. There is no charge to the applicant.

10. Do I need to have a physical examination?

Yes. The physical examination will be given by the Student Health Service of the University.

11. Do I need to come for a personal interview?

Yes. An appointment will be made for you on a convenient date for you to come to Iowa City for the interview, your pre-admission tests and physical examination.

12. When should I apply?

Anytime.

13. Where is the School located?

Westlawn, Room S-202. The entrance is in the south wing and is plainly marked.

TARGETS—FOR TRAFFIC SAFETY

Vacation travel has long been an American habit, and the American Automobile Association tells us that a total of 66 million persons, traveling in 22 million cars take automobile vacations during the year. Vacation time is a time to rest and relax, to forget worries—but not courtesy. Courtesy is a highly practical addition to any motor trip. It doesn't cost a penny, and it actually can prevent accidents.

TIPS FOR A SAFE TRIP

The motorist who is planning a vacation trip can do a lot to insure the safety of the trip by the way he plans. Planning for safety can be the most important factor in making any trip comfortable and enjoyable for all.

Before the Take-Off, Plan for . . .

Getting the best possible performance out of your car by having it completely checked.

Emergencies, by taking inventory of supplies such as first aid kit, spare tire, flashlight, tool kit for changing tires, maps, keys, identification, etc.

Sufficient time to take rest stops during the day and allow for a good night's sleep at night. Fatigue and safe driving seldom go together.

Frequent stops to enjoy the scenery. Don't try to drive and look at interesting sights at the same time. Pull off the road and stop—then look at the scenery.

Changing traffic laws in the states you will drive through. Learn the traffic regulations before you enter a state.

Loading of your car with luggage and vacation equipment so that the driver will have full, clear vision on front, sides and rear.

Along the Way, Look Out for . . .

Children. Children play out of doors more during vacation months.

Signs of Life. The five basic traffic sign shapes have been adopted by most states and are easy to recognize on sight. The shapes—octagonal, oblong, diamond, round and crossbuck. Know them . . . obey them.

Heavy Traffic. Many highways in rural areas have unusually heavy traffic during vacation time. Be prepared. Watch for traffic jams in industrial areas at the times work shifts are changing.

Regional Peculiarities. Level stretches of road, appearing easy to drive, can encourage excessive speeds and can also cause sleepiness. Mountain driving sometimes causes drivers to hug the center line too closely. Be prepared for narrow roads, sharp turns, and narrow bridges. In some states, livestock and wild game are permitted to be unfenced and wander on the highway. Drive cautiously at night—animals can be blinded by headlights.

SUPPLEMENTARY SLOGANS

Vacation—A Peaceful Rest or Rest in Peace.
A Hand Out Is a Good Turn.
An Open Road Doesn't Mean Open Up.
Move Over—Give Narrow Minds a Wide Road.
A Thinking Driver Doesn't Drink—A Drinking Driver Doesn't Think.

TOGETHER WE PROGRESS

Highlights From the Address Presented by Mrs. Leo J. Schaefer, President Woman's Auxiliary to the American Medical Association

This is the time of year that all county and state auxiliaries are preparing their final reports to present to their conventions, state and national. The total efforts of 51 state and territorial auxiliaries composed of more than 1,200 county auxiliaries, with a membership of more than 64,000 members will show a superb record of service in the field of health education.

The National Auxiliary was organized 32 years ago in St. Louis with Mrs. Samuel Clark Red of Texas as the first president. Twenty-four women from nine states were charter members. Emerson once said, "An institution is the lengthened shadow of one man." The Woman's Auxiliary of today is truly the lengthened shadow of one woman, Mrs. Red, and her early assistants.

It is apparent from your sessions here that you are well informed concerning the regular program of the auxiliary.

As auxiliary members we have a two-fold service to render: 1. education of ourselves in subjects relative to the medical profession and 2. bringing this message of medicine to our home communities through the organizations in which we hold membership. All through the year we have opportunities to assist with health programs of national importance which are in the headlines today.

As the year 1954 progresses, take seriously the message of the White House Conference on Highway Safety. Isn't it as important to save healthy lives as saving diseased lives? Medical science has added twenty years to the normal life span, dread diseases—typhoid fever, small pox, diphtheria and many others—have been brought under control and rarely exist, but still we do very little about the unnecessary deaths on the highway, 38,000 in 1953, more deaths than in the Korean War. *Nation-wide public support* at the community level for using *proven* methods of safety must be developed. An *aroused* public opinion and demand for law enforcement is the only answer. When public opinion at the community level demands safety we will have it. With the summer months approaching, add safety to your program, not only highway safety but safety wherever the family lives and vacations.

This year of transition from a fighting war to peace requires adjustment on the part of each individual. A spirit of co-operation with our government must prevail and community selfishness must be replaced with a willingness to make personal sacrifices for the good of our country. God has blessed our country and expects every American to respect and protect these blessings. Do we want to slip into the role of spectator at the biggest game, the game of life? Look around us on all sides, look next door, down the street, around the corner, and see the many opportunities awaiting you as a leader in your community.

In conclusion, may I add—the auxiliary meeting is your school, the Bulletin is your text-book and TODAY'S HEALTH magazine is *your* means of disseminating authentic health information.

As we follow the progress of medicine with our physician husbands, we know well the words of the great French surgeon, Ambrose Pare, "*the light of a candle will not diminish no matter how many come to light their torches by it.*" We can each light our own candle and let it shine so that the world may see it and prove to the world that "Together We Progress."

Ohio Medical Auxiliary News
June 1954

TOGETHER WE PROGRESS is the National Theme for 1953-54, but are we progressing together? The correct answer to the following questions would be yes.

Have you subscribed to *Today's Health* and *Bulletin*?

Are your dues paid?

Did you take an active part in your auxiliary?

Do you keep informed on Legislation?

Are you taking an active part in the Civil Defense Program?

Have you made a contribution or worked for AMEF and Medical Benevolence projects?

Pennsylvania Keystone Formula, May, 1954.

HOW TO CURE DIS-EASE IN YOUR AUXILIARY

ACCENTUATE THE POSITIVE POLICY

1. Attend regularly—Consider the weather (whatever it is) a challenge and GO. "An ounce of loyalty is worth a pound of cleverness."

2. Be on time. "It's always later than you think!"

3. Stay throughout the meeting. Each member is the Auxiliary.

4. Accept your responsibilities. If this means committee work, attend the committee meetings. "When you set yourself a task, finish it."

5. Accept office. "He has the right to criticize who has the heart to help."

6. Criticism can be constructive. "I like to praise and reward loudly, to blame quietly."

7. When the chair asks *your* opinion, give it *then*. After the meeting is often too late. "New thought is new life."

8. "No chain is stronger than its weakest link" and the clique system is a weak system.

9. Pay dues promptly. "Money isn't everything, but it sure helps."

10. Work diligently to procure new members. Let them feel your loyalty, enthusiasm and dedication. "Every great and commanding movement in the annals of the world is the triumph of enthusiasm."

Little groups of women, working hand in hand,
Create a goodly power across our gracious land.

Massachusetts Baystater, April, 1954.

DOCTOR'S WIFE HAS HER OWN TEN COMMANDMENTS

She must not know the meaning of the word "jealous."

She must never gossip.

She must run a cafeteria, serving meals at all hours for her husband.

She must be—like Caesar's wife—above reproach.

She must have self-reliance and self-control.

She must be able to think quickly and sanely in emergencies.

She must be a diplomat, see all, hear all, say a lot, yet say nothing.

She must learn to bear stoically and without complaint, disappointments in her personal plans.

She must be a good mother and father, because doctors are often too busy to discipline their own children.

She must be a good "doctor" because doctors never take time to doctor themselves.

—Author Unknown, *Wichita Medical Bulletin*.

SPEAKERS' BUREAU RADIO SCHEDULE

WOI—Thursday at 11:15 a.m.

"TRAIN UP A CHILD"

August 5 "Persistent Bad Habits"

August 12 Your Child in School

August 19 .. Children as Members of the Family

August 26 Nutrition and Health

WSUI—Tuesday at 11:45 a.m.

"TIME OUT"

August 3 Medical Inventory

August 10 Accidents

August 17 First Aid

August 24 Getting Along With People

August 31 Restful Moments

Television broadcasts will be resumed in the fall

COUNTY SOCIETIES

MEETINGS

Pottawattamie

The Pottawattamie County Medical Society entertained members of the Auxiliary at dinner on June 15 at the Elks Country Club, Lake Manawa.

Webster

Mr. James W. Fay, an Emmetsburg attorney, was speaker at a dinner meeting for the members of the Webster County Medical Society and their wives, held at the Fort Dodge Country Club on June 30.

DEATHS

Dr. Joseph H. Wolfe, 71, of Iowa City, died at Mercy Hospital there on June 12.

Dr. Anthony P. Donohoe, 78, of Davenport, a Life Member of the Iowa State Medical Society, died at Mercy Hospital there, on June 12. He had been ill for the past two years and had been retired from practice for that length of time.

Dr. Corwin S. Cornell, 67, of Knoxville, a Life Member of the Iowa State Medical Society, died on June 12. Dr. Cornell, his grandfather and his father practiced a total of 105 years in Knoxville.

Dr. Frederick H. Roost, 77, Sioux City eye, ear, nose and throat specialist and a Life Member of the Iowa State Medical Society, died on June 9 at his home. He had been ill for a considerable time and had lived in retirement since 1949.

INSURANCE STUDY FAVORS MEDICAL MANAGEMENT OF ULCERS

Of about 45,000 cases with a record of ulcers, 96 per cent of them men, those who had been medically treated, without an operation and without having had a hemorrhage, were found to have had a relatively favorable mortality experience during the 15 years covered. These figures constitute a part of the findings arrived at by the Society of Actuaries, after a study of mortality experience among 725,000 life-insurance policyholders with some known health impairment.

On the other hand, those with a history of surgically treated ulcers had a materially higher than average mortality experience, despite advances in surgical technique. Also, those un-

operated but with a history of hemorrhage appeared to be somewhat poorer than average risks.

It was found that three fourths of the total ulcer cases were duodenal.

CHEST SURGERY FILMS AVAILABLE

Two new 16mm films from Denmark, showing in operative close-ups the use of an unusual plastic sponge in lung-collapse therapy, are being circulated without charge by Lakeside Laboratories, 1707 East North, Milwaukee 1. The first of them, in color, shows the operative procedure in actual cases and describes the theory, with anatomic diagrams. The other, in black and white, deals with a series of case studies illustrated with x-rays and tomograms.

The sponge, called Polystan Plombe, is made of a special high-molecular polyethylene, and is said to be inert, non-shrinking and permanent. The manufacturers claim that it has dramatic possibilities even in advanced bilateral tuberculosis.

RHODE ISLAND'S CALEB FISKE PRIZE

The Trustees of what is considered America's oldest medical essay competition, the Caleb Fiske Prize of the Rhode Island Medical Society, announce as the subject for this year's dissertation "Modern Developments in Anesthesia." The dissertation must be typewritten, double spaced, and should not exceed 10,000 words. A cash prize of \$250 is offered.

For complete information regarding the regulations write to the Secretary, Caleb Fiske Fund, Rhode Island Medical Society, 106 Francis Street, Providence 3, Rhode Island.

MORE "COFFEE BREAKS"?

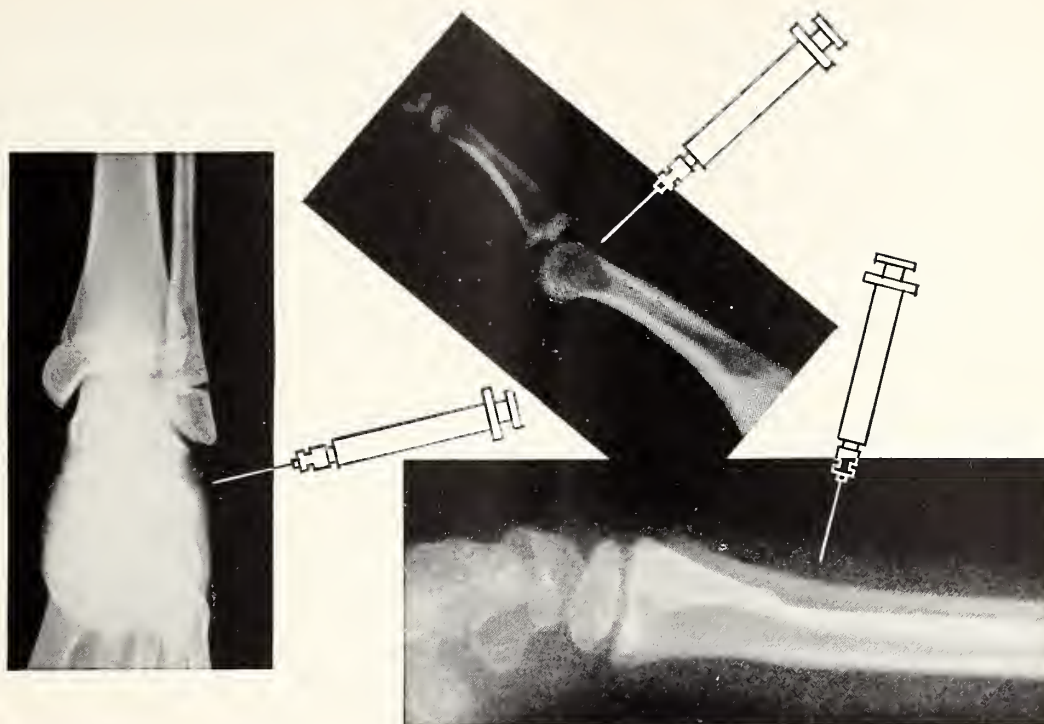
How long should office hours last? The conventional limit on attentiveness is three hours. Most psychologists seem to agree that beyond three hours sustained mental effort is impossible.

No one has yet made a study of the effects of a long, unbroken office-hour period on the doctor. Some bright graduate student of sociology or psychology might earn a Ph.D. by moving in on the doctor at hour intervals and recording his alertness and judgment.

It might lead to a change in the mores: an office-hour period ending definitely at the three-hour level, with maybe an interim cup of coffee or tea every hour.

A lot of fun has been poked at the "coffee break" in business offices. But it may well be something more than a concession to laziness. It may be the pause that pays off in better subsequent performance.

MEDICAL ECONOMICS, May, 1954, p32



Use of Alidase® in Closed Wounds: Contusions, Sprains, Dislocations, Simple Fractures

In traumatic surgery¹ where "definitive treatment . . . is often delayed while the surgeon waits for nature to dispose of hematoma and oedema" Alidase is an efficient means^{1, 2} of accelerating dispersion of accumulated fluids.

Swenson² has described his highly successful results with Alidase in various types of closed wounds. He summarized them as follows:

To remove local fluid accumulations in contusions or bruises, "The usual dose, 500 viscosity units Alidase® mixed in a small amount of normal saline, is injected into the localized fluid. Mixing the hyaluronidase in 1 per cent procaine solution will also produce local vasodilatation, relief of local pain and more rapid absorption of the fluid mass. This method can also be applied to traumatized bursae or synovial spaces which do not respond to repeated aspirations."

The point of maximal pain is infiltrated with 10 cc. of a 1 per cent procaine solution to which 500 viscosity units of Alidase have been added. With this simple technic, a high percentage of successful results has been obtained.

Alidase may be used to advantage to produce more rapidly a short-acting, complete block anesthesia and to facilitate reduction in subluxation or complete dislocations of the interphalangeal joints. When anes-

thesia is required for fracture reduction, local block anesthesia can be simplified by adding Alidase to the anesthetic solution. Alidase also tends to decrease local edema and hematoma formation.

Fluids administered with Alidase are rapidly absorbed from subcutaneous tissue. The simplicity of hypodermoclysis avoids the cumbersome arm board, permits convenient administration with little or no pain or swelling, is vein-sparing and saves nursing time in such conditions as burns, postoperative states, toxemias and parenteral alimentation.

Alidase (brand of hyaluronidase) is supplied in serum-type ampuls of 500 viscosity units. It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. G. D. Searle & Co., Research in the Service of Medicine.

1. MacAusland, W. R., Jr.; Gartland, J. J., and Hallock, H.: The Use of Hyaluronidase in Orthopaedic Surgery, *J. Bone & Joint Surg.* 35-A:604 (July) 1953.

2. Swenson, S. A., Jr.: Minor Surgical Aspects of Closed Wounds, *Am. J. Surg.* 87:384 (March) 1954.

Cook County Graduate School of Medicine

Intensive Postgraduate Courses

STARTING DATES

SURGERY—Surgical Technic, Two Weeks, September 13, September 27
 Surgical Technic, Surgical Anatomy & Clinical Surgery, Four Weeks, October 11
 Surgical Anatomy & Clinical Survey, Two Weeks, August 23, October 25
 Surgery of Colon & Rectum, One Week, September 13
 Basic Principles in General Surgery, Two Weeks, September 20
 Breast & Thyroid Surgery, One Week, October 25
 Thoracic Surgery, One Week, October 11
 Esophageal Surgery, One Week, October 4
 General Surgery, Two Weeks, October 4; One Week, October 4
 Gallbladder Surgery, Ten Hours, October 25
 Fractures & Traumatic Surgery, Two Weeks, October 25
GYNECOLOGY—Office & Operative Gynecology, Two Weeks, September 20
 Vaginal Approach to Pelvic Surgery, One Week, September 13
OBSTETRICS—General & Surgical Obstetrics, Two Weeks, October 4
MEDICINE—Two-Week Course, September 27
 Electrocardiography & Heart Disease, Two Weeks, October 11
 Gastroenterology, Two Weeks, October 25
 Gastroscopy, One Week, September 13
RADIOLOGY—Diagnostic Course, Two Weeks, October 4
 Clinical Uses of Radio Isotopes, Two Weeks, October 4
PEDIATRICS—Clinical Course, Two Weeks, by appointment
 Congenital & Rheumatic Heart Disease in Infants & Children, One Week, October 11 and October 18
 Two Weeks, October 11
UROLOGY—Two-Week Urology Course, September 20
 Ten-Day Practical Course in Cystoscopy every two weeks
 Teaching Faculty—Attending Staff of Cook Co. Hospital
 Address: Registrar, 707 South Wood St., Chicago 12, Ill.

The Month in Washington

Washington, D. C.—During the next three years the federal government expects to help finance the construction of thousands of new medical and dental facilities—diagnostic-treatment clinics, vocational rehabilitation centers, nursing homes, and chronic-disease hospitals. Only three strings are attached: the facilities must be non-profit, they must be under medical or dental supervision, and local communities must raise part of the cost.

Legislation establishing the new program was enacted just as Congress plunged into its adjournment rush, and before it had come to final decisions on reinsurance and other major controversial bills in the health field.

The new operation was authorized by amending the Hill-Burton Act (passed in 1946 to assist hospitals) to permit grants to units that do not qualify as hospitals. Under the original Hill-Burton law, grants could be made to rehabilitation centers and diagnostic-treatment clinics only if they were attached to hospitals. Grants could also be made to chronic-disease hospitals. The new law authorizes help to centers and clinics operating on their own, a provision which the Public Health Service expects will be of particular assistance to smaller communities. It also offers aid to nursing homes, which previously were not covered.

In the case of chronic-disease hospitals, it is explained that the law offers two new inducements for construction: 1. Money is allocated to the state and earmarked for this particular type of hospital. 2. The federal government will be able to pay 50 per cent or more in all cases, whereas under the old law its share was as low as one-third in some of the higher-income states.

Grants to clinics, centers, and nursing homes will have to wait on state surveys to determine priorities, according to U. S. hospital officials. However, if local sponsors take the initiative, grants can be processed immediately for chronic-disease hospitals, as earlier Hill-Burton surveys have established their priorities. Failure of communities to construct chronic-disease hospitals was one of the disappointments of the first Hill-Burton program.

The first year's appropriation will be \$37.4 million, increasing over the next three years until the total authorization of \$182 million has been reached. The new projects in no way interfere with the regular Hill-Burton grants for construction of hospitals, for which \$75 million is available this year.

The final flurry over the reinsurance bill was preceded by a concerted drive by the administration. The President himself interceded with insurance company officials, and Secretary Hobby

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RICHARD B. LEANDER, M.D.

agreed to amendments in an effort to satisfy the state insurance commissioners. The commissioners, who would have an important role in administering the reinsurance program, at first had flatly opposed it. President Walter B. Martin and other AMA officials were called in for a discussion of reinsurance at the Department of Health, Education, and Welfare, and later Sherman Adams, assistant to the President, also invited Dr. Martin to a White House meeting on the same subject.

As expected, bills for a new program of medical care of military dependents were left stranded when adjournment time approached. Before he introduced his bill on the subject, Chairman Dewey Short of the House Armed Services Committee insisted that Defense Department estimate first year's additional cost of the program. The estimate was \$67 million.

The military scholarships bill met the same fate—too much time taken up in drafting a version that would satisfy all executive departments. Under this plan the Defense Department would grant tuition-and-maintenance scholarships to medical and dental students, in exchange for pledges to spend one year in military service for every subsidized year of training. Both bills are certain to reappear next session.

For the current fiscal year, the Department of Health, Education, and Welfare has available \$1,663,413,761. The appropriation bill is \$10,904,500 more than the administration requested, but is less than last year's budget of \$1,927,432,261 (the decline explained by decreased public assistance grants to states). Public Health Service has \$228,060,000 for its regular programs.

G-I BILL SERVED GOOD USES

On June 22, 1954, the tenth anniversary of the G-I Bill, the Veterans Administration issued a highly interesting summary of the uses to which ex-servicemen put the money to which they were entitled.

One out of every five men and women who served in World War II obtained a V-A guaranteed and insured loan. The totals were 3,600,000 veterans and \$23,500,000,000. Home loans accounted for 90 per cent of that amount, farm loans and building loans totaling no more than three-quarters of a billion dollars together. The homes they bought or built were neither cracker-boxes nor mansions. Sixty per cent paid between \$10,000 and \$15,000 each for their houses; 30 per cent paid less than \$10,000 apiece; and 10 per cent paid over \$15,000.

To date, the V-A reports that \$3,000,000,000—about one eighth—of the loans have been repaid in full, and the defaulters have numbered 32,000, or less than one per cent.

More than half of the men and women who served in World War II—7,800,000 of them—received education or job training during the past decade at government expense under the G-I Bill. Of the total, 3,500,000 went to schools below college level; 2,200,000 attended colleges and universities; and 2,100,000 got various sorts of on-the-job training.

The V-A points out that the increased incomes which G-I Bill educations enabled ex-servicemen to attain are making it possible for the government to collect a billion dollars in income tax annually that wouldn't have been available if the veterans, or the bulk of them, had remained comparatively uneducated. Thus, it claims that the G-I Bill will have paid for itself within the next fifteen years.

Nearly 9,000,000 veterans drew \$3,800,000,000 in unemployment, self-employment and readjustment allowances under the G-I Bill. The average individual was in that part of the program for 19 weeks, and only 900,000—ten per cent of the total—exhausted their full rights to that benefit.

EXCHANGE SCHOLARSHIPS IN PLASTIC SURGERY

The Foundation of the American Society of Plastic and Reconstructive Surgery, Inc., 30 Central Park So., New York City 19, is now starting upon its sixth year of arranging and sponsoring three-month exchange scholarships between centers for plastic surgery in various parts of the world. On the basis of a contest, the Foundation awards two scholarships annually, and, in addition, makes arrangements under which experienced plastic surgeons other than contest winners can receive full maintenance at the hospitals where they wish to study. The number of plastic centers available to the scholarship pool has more than doubled since last year. It now includes 25 in the United States and Canada; 2 in Argentina; 1 in Mexico; 7 in the British Isles; 1 in Holland; 3 in Sweden; and 5 in France.

The scheme is said to be attracting the attention of other societies and colleges that are interested in promoting worldwide cooperation and in making study in America possible for officially-endorsed foreigners who could not otherwise afford to come here.

ADDENDA TO ROSTER

In the Roster of Members of the Iowa State Medical Society published in the July issue of the JOURNAL, the following were inadvertently omitted:

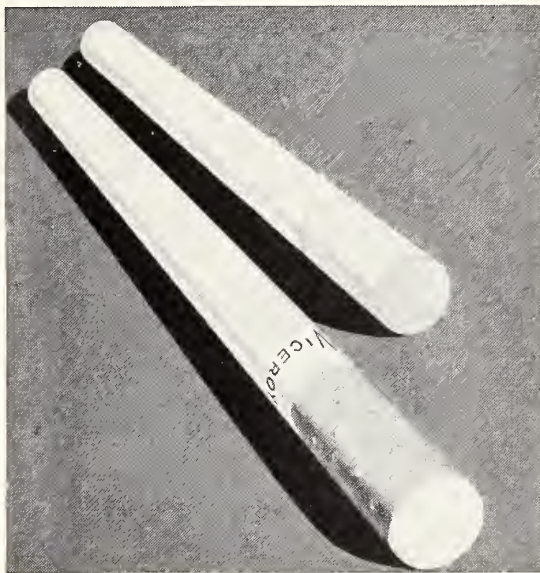
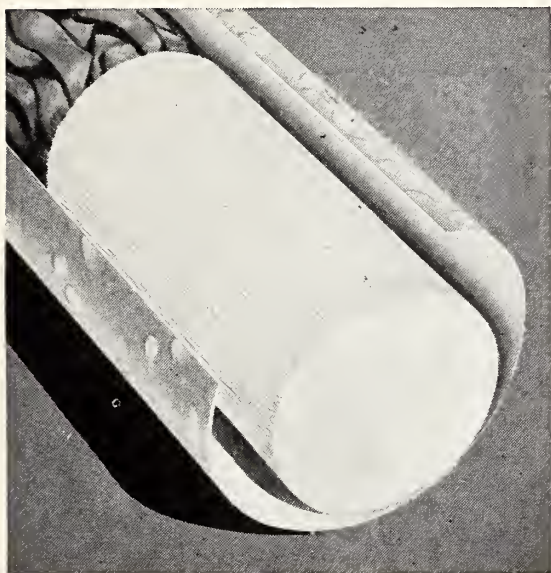
Milford D. Hayden, Marcus
Alfred K. Meyer, Clinton

DOCTOR, WHEN YOUR PATIENTS ASK...



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2. PLUS KING-SIZE LENGTH

The smoke is also filtered through Viceroy's extra length of rich, costly tobaccos. Thus Viceroy actually gives smokers *double the filtering action* . . . to double the pleasure and contentment of tobacco at its best!



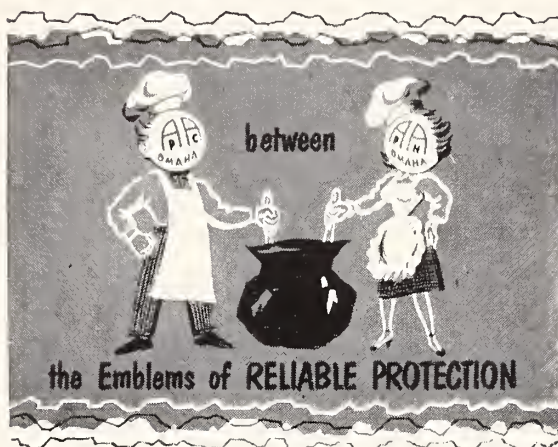
ONLY A PENNY OR TWO MORE
THAN CIGARETTES WITHOUT FILTERS

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Filter Tip **VICEROY**

OUTSELLS ALL OTHER FILTER TIP CIGARETTES COMBINED

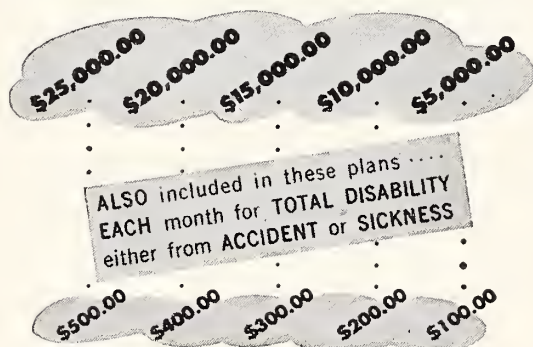


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PERSONALS

Dr. Peter Jerome, who for the past year has been a staff member at the V-A Hospital in Iowa City, has associated himself with **Drs. P. M. Jes-sup** and **Robert Asthalter**, at Muscatine. Dr. Jerome is a native of Austria and a 1947 graduate of the University of Heidelberg, in Germany. In this country he has completed five years of postgraduate study toward certification by the specialty board in internal medicine, serving internships and residencies at Yonkers General Hospital and Vassar Hospital, in New York, Montana Deaconess Hospital, in Great Falls, and at the Veterans Administration installations at Richmond, Virginia, and Iowa City. He recently became a citizen of the United States.

On July 16, the former **Mary Louise Thompson, D.D.S.**, and **Glenn M. Skallerup, M.D.**, were married at Red Oak, where Dr. Skallerup is engaged in the practice of surgery.

Dr. Piet Frans Von Bommel has become an assistant professor of medicine at S.U.I. and physician at the Student Health Service there. A 1926 graduate of the medical school at the University of Leiden, in Holland, Dr. Von Bommel subsequently was awarded the D.Sc. degree there and engaged in private practice at The Hague. Since then he has been a public health officer for the Netherlands government and a medical consultant for the Standard Oil Company of New York, in the East Indies.

Dr. Kenneth M. Coyne gave up his practice in Burlington on June 26 to accept a 3-year residency in obstetrics and gynecology at the Hurley Hospital, in Flint, Michigan. Dr. Coyne is undecided as to whether he will return to Iowa afterward.

Dr. James E. Reeder, Sr., of Sioux City, has been appointed a member of the State Board of Health, to fill the vacancy caused by the death of **Dr. Prince E. Sawyer**. His interim appointment will terminate on January 1, 1955. **Dr. J. W. Billingsley**, of Newton, was appointed to a five-year term, on the Board of Medical Examiners, succeeding **Dr. M. A. Royal**, of Des Moines.

Dr. L. A. Baldwin, who has practiced medicine for the past 45 years at Riverton, celebrated the fiftieth anniversary of his entry into the profession

on June 11. Dr. Baldwin graduated from Rush Medical College, now a part of the University of Chicago, in 1904. He intends continuing with his work.

Dr. Mary Ann Croker, of Manchester, who had no opposition on either ticket in the June primary election, is assured of becoming coroner of Delaware County. Dr. Croker is a 1952 graduate of the College of Medicine at S.U.I., interned at Broadlawns Polk County Hospital, in Des Moines, and has practiced at Manchester only since last November.

During June, **Dr. George Robinson**, of Hudson, took his oral examination, the final step in qualifying for board certification in anesthesiology.

Drs. Walter V. Campbell, Joseph Lederman and Kenneth M. Lemon, have secured articles of incorporation for a firm that is to construct and own a clinic building adjoining Mercy Hospital, in Oskaloosa.

Dr. R. R. Goad, of Muscatine, attended the Pan American Association of Ophthalmology meeting at São Paulo, Brazil, June 11-17. While in South America, he toured several countries on both the east and west coasts.

Dr. T. J. Glasscock attended the 50-year reunion meeting of his graduating class at the University of Kentucky, in Louisville, in June. He has practiced 23 years at Hawarden.

On June 4, **Dr. Lucien E. Morris** left S.U.I., where he had been associate professor of anesthesiology, to become professor and head of the anesthesiology department at the new college of medicine at the University of Washington, in Seattle. Dr. Morris has taught at Iowa City since 1949, and distinguished himself by, among other things, developing a new type of ether vaporizer and constructing an overhead boom that eliminates the tangling of high-pressure gas tubing on the floors of operating rooms.

Dr. John Baker, who has been associated with the **Drs. Kersten** at Ft. Dodge, took over the practice of **Dr. P. W. Sorenson** at Cedar Falls, on July 1. Dr. Sorenson is henceforth to practice in California.

His friends and patients in the Auburn community and in Lake City have financed the re-decorating and refurbishing of a room at the McVay Memorial Hospital in memory of the late **Dr. F. W. Hobart**.

50 and seven

YEARS TREATING ALCOHOL AND DRUG ADDICTION

In 1897 Doctor B. B. Ralph developed methods of treating alcohol and narcotic addiction that, by the standards of the time, were conspicuous for success.

Twenty-five years ago experience had bettered the methods. Today with the advantages of collateral medicine, treatment is markedly further improved.

The Ralph Sanitarium provides personalized care in a quiet, homelike atmosphere. Dietetics, hydrotherapy and massage speed physical and emotional re-education. Cooperation with referring physicians. Write or phone.

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Dr. Leo Timp, a graduate of the college of medicine at Marquette University who interned at Iowa Methodist Hospital, in Des Moines, has joined **Dr. C. A. Heise, Jr.** in the practice of medicine at Jewell.

Dr. Robert J. Smith, a 1953 graduate of the S.U.I. College of Medicine, has entered practice as an associate of **Dr. T. E. Blong**, at Stacyville. He interned this past year at Broadlawns Polk County Hospital, in Des Moines.

Dr. R. L. Bartley, who for the past four and a half years has practiced at Sully, is now associated with **Drs. L. E. Jensen** and **H. K. Merselis**, at Audubon.

After a year in Ottumwa, **Dr. Don N. Orelup** has moved his practice to Albia.

Dr. Kenneth M. Keane opened an office for the practice of orthopedics in Sioux City on July 1. He recently completed a residency in his specialty at Kosair's Crippled Children's Hospital and the Veterans Administration Hospital, in Louisville.

Dr. William J. Barbour, a 1947 graduate of the S.U.I. College of Medicine, has located in Shell Rock. Following internships and residencies at Seattle Lutheran Hospital, S.U.I. and Hines Veterans Hospital, Chicago, he has served a two-year tour of military duty, and has been a staff member in a clinic at Paxton, Illinois for two years.

The McFarland Clinic, in Ames, has announced the association of **Dr. John R. Doran**, a specialist in obstetrics and gynecology. A 1950 graduate of the S.U.I. College of Medicine, Dr. Doran interned at St. Joseph's Hospital, Duluth, and has just completed a three-year residency in his specialty at his *alma mater*.

Two additional honors have been conferred upon **Dr. Arthur Steindler**, of Iowa City. He went to Europe to accept an honorary fellowship in the Royal College of Surgeons, but while there he has also been made an honorary fellow of the Royal College of Medicine, and, in Paris, an honorary member of the Orthopedic Society of France.

On July 1, **Dr. N. L. Krueger**, a physician in Stuart for the past three years, closed his office to accept a residency in pathology at St. Mary's Hospital, Duluth.

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1. Werner, A.: Acta endocrinol. 13:87, 1953.

2. Malleson, J.: Lancet 2:158 (July 25) 1953.

3. Goldzieher, M. A., and Goldzieher, J. W.: Endocrine Treatment in General Practice, New York, Springer Publishing Company, Inc., 1953, p. 23.



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Dr. J. D. Lyon opened an office for the practice of medicine and surgery in McGregor on July 1. Following his graduation from the University of Minnesota Medical School in 1939 and an internship at the Minneapolis General Hospital, he put in nine years of military service, interrupted by a postgraduate course at Harvard Medical School and four years of private practice at Seattle.

Dr. C. N. Hyatt has moved his practice from Humeston to Corydon, where an office building has recently been built for him.

Dr. James R. Paul has joined **Dr. Gerald R. Rausch** in the practice of neurology and psychiatry at Sioux City. Dr. Paul is a graduate of the University of Nebraska College of Medicine (1942), and after his internship served in the Air Force. He took his psychiatric training at Barnes Hospital and comes to Sioux City from Lincoln, Nebraska.

Dr. E. A. Rust, of Webb, attended the June meeting of alumni at the Jefferson Medical College, Philadelphia, where he received his medical degree just 50 years ago.

Dr. James Dunn, of Davenport and Clinton, a Life Member of the Iowa State Medical Society, was one of the physicians honored at the graduation exercises of the University of Chicago's Rush Medical College. It was the fiftieth anniversary of the granting of his degree.

At a recent meeting of the Iowa Association of Pathologists, **Dr. F. C. Coleman**, of Des Moines was named president of the organization; **Dr. Ray Phelps**, of Ottumwa, was made vice-president; and **Dr. Richard F. Birge**, of Des Moines, was made secretary-treasurer.

Dr. Pierre J. Pichot, clinical professor of psychiatry at the University of Paris, addressed the staff of the VA Hospital in Knoxville, June 23, on "Language Disturbances in Cerebral Dysfunction."

Following his return from an 18-month tour of duty in Japan, Korea and San Diego, Calif., as commanding officer of a naval surgical team, **Dr. Richard E. Paul** opened a surgical practice at 805 Bankers Trust Building, Des Moines, on July 1. A 1944 graduate of the College of Medicine at S.U.I., Dr. Paul was first a resident in surgery and afterward, for three years, a staff member at the Des Moines VA Hospital. He is a diplomate

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Dr. R. M. Minkel has moved from Fort Dodge
to Lead, South Dakota, where he will serve on
the staff of the Homestake Hospital.

June 10 was the fiftieth anniversary of Dr. F. R.
North's graduation from Keokuk Medical College.
He has practiced at Winfield during 32 of the years
since 1904.

ROSTER OF IOWA PHYSICIANS IN MILITARY SERVICE

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Bogle, W. C., Marion
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(Camp Pendleton, Calif.) Lt., U.S.N.R.
Broman, J. A., Maquoketa
(Ft. Sill, Okla.) Capt., A.U.S.
Cline, H. L., Iowa City
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(Manhattan, Kans.) Capt., A.U.S.
Frys, Russell N., Iowa City
Garred, J. L., Whiting
(San Francisco, Calif.) Lt., U.S.N.R.
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Hickman, D. M., Indianola
(Alexandria, Louisiana) 1st Lt., U.S.A.F.
Isham, R. B., Osage U.S.N.R.
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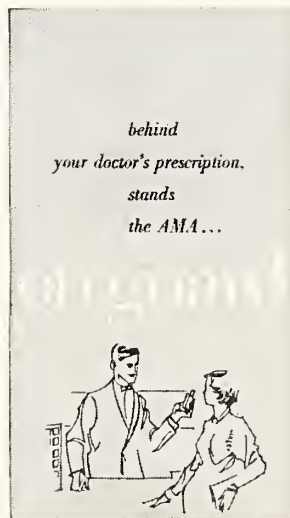
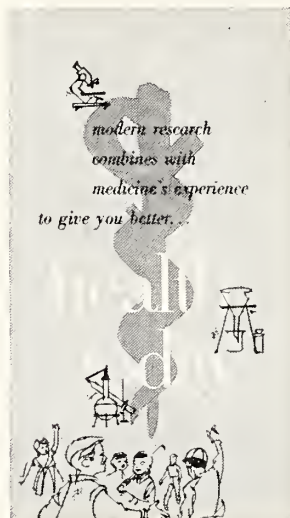
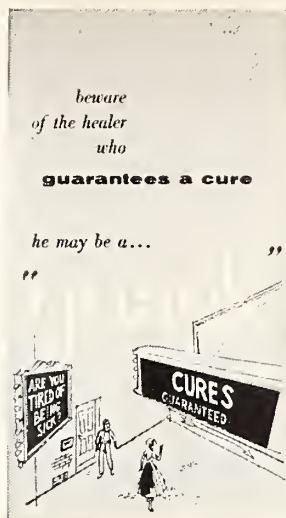
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AMA CHECKS ON "STRIKE IT RICH" APPLICANTS

For a long time many members of the medical profession have questioned the heartbreak stories of people appearing on the "Strike It Rich" television show—stories that have left the viewing audience with the impression that financial assistance was needed in paying for the high cost of medical care.

Following the AMA's protest regarding the misapprehension that the program was fostering, the producer gave the organization an opportunity to check two cases. In one of them, an appeal had been made on the basis that repeated illnesses had accumulated a total medical bill of around \$6,000. On investigation, it developed that the family was covered by Blue Cross and had used its service on many occasions. The doctor who served the family reported that he had discussed fees with the parents and that they were perfectly willing to assume responsibility for the medical care involved. Social service workers and various hospitals reported that the patient had never lacked medical care for financial reasons.

The second case involved a boy, 16, who had been blind since birth. He had requested the privilege of appearing on the program in order to obtain funds to finance a comprehensive examination of his infirmity. The AMA investigation revealed that he had had repeated examinations by the chief of ophthalmology at one of the medical colleges and had, for a number of years, been attending a state school for the blind.

In both of these cases the investigations revealed that the individual had been adequately cared for at the community and state levels. This information was made available to the producer of the show, and both individuals were considered ineligible to participate in the program.

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No. 9

Certain Lesions of the Adrenal Glands of Surgical Interest

JAMES T. PRIESTLEY, M.D.*

ROCHESTER, MINNESOTA

FEW IF ANY STRUCTURES of comparable size play a more important part in the regulation of normal physiologic processes and certain pathologic states in the human body than do the adrenal glands. This fact is partly explained by the dual embryologic origin of these glands. The cortex, which is of mesodermal origin, arises from cells which are in close proximity with the primitive sex gland. As one might expect, therefore, two important products of cortical secretion are androgens and estrogens. In addition, the adrenal cortex produces many other steroids, which help to regulate the metabolism of protein, fat and carbohydrate, as well as the retention of salt and water. In contrast, the medulla is derived from ectodermal tissue located near the site of origin of the sympathetic ganglion cells. The most important known secretions of the medulla are epinephrine and norepinephrine, both of which, in ordinary amounts, increase the systolic blood pressure.

Various abnormal states may be produced by abnormal function of the adrenal glands. Some of these can be recognized with considerable certainty at the present time, and it seems probable that more of them will be recognized in the future. Hypofunction of the adrenal cortices, which may result in Addison's disease, has long been recognized by the internist. Fortunately, since the discovery of cortisone this disease can now be treated more effectively than in former years. The surgeon is concerned primarily with hyperfunction of the adrenal glands, which may be caused either by hyperplasia of the cortex or by a functioning

tumor of either the cortex or medulla. He must be familiar, of course, with the prevention and treatment of adrenal insufficiency, for this state may occur after certain operations on the adrenal glands.

Tumors of the adrenal cortex usually are unilateral, benign functioning tumors, but malignant or nonfunctioning tumors of the adrenal cortex are not rare. In view of the many different products of adrenocortical secretion, it is not surprising that clinical syndromes produced by a functioning tumor of the adrenal cortex vary considerably, depending on the age and sex of the patient as well as on the type and amount of secretory products which are produced. Actually, cortical hyperfunction is caused more often by cortical hyperplasia than by tumor. In contrast, hyperplasia of the adrenal medulla has not been recognized as a clinical entity, although functioning tumors of the medullary portion of the gland are well known.

LESIONS OF ADRENAL CORTEX

Less Common Manifestations.—The adrenogenital syndrome is caused by excess production of androgens, and its clinical manifestations depend on the age and sex of the patient. Thus, congenital adrenocortical hyperplasia occurring at an appropriate period of intra-uterine life results in pseudohermaphroditism in girls at the time of birth. The clitoris is enlarged and other genital phenomena suggest bisexuality. Evidences of excessive androgenic activity persist after birth, and somatic precocity occurs as the child develops. Congenital adrenal hyperplasia occurring in males results in macrogenitosomia praecox (Wilkins)¹ with excessive genital development usually noted

*From the Section of Surgery, Mayo Clinic and Mayo Foundation. The Mayo Foundation is a part of the Graduate School of the University of Minnesota.

at birth. Excessive androgenic activity persists after birth, with the result that both somatic and sexual precocity occur. The testes remain small, however, and spermatogenesis does not occur. Although congenital adrenocortical hyperplasia is characterized by evidences of excess androgenic activity in both male and female infants, these same patients may also show evidences of adrenal (cortical) insufficiency associated with dehydration and loss of sodium and chloride.

The postnatal occurrence of the adrenogenital syndrome, caused either by functioning tumor or by hyperplasia, is characterized, in girls, by normal appearance at birth with subsequent evidence of virilism and somatic precocity. The clitoris may become enlarged; early appearance of pubic and axillary hair is noted and there is premature closing of the epiphyses accompanied by excessive muscular development. Virilism is evident when this syndrome develops in women. Hirsutism, amenorrhea, acne and a deep voice usually develop; the breasts atrophy and subcutaneous fat decreases.

Development of the adrenogenital syndrome postnatally in young boys results in somatic and homologous sexual precocity. The onset of this syndrome has not been recognized clinically in men. Attempts to control excessive androgenic activity associated with adrenal cortical hyperplasia (both congenital and postnatal) by resection of the adrenals have not been satisfactory. Wilkins observed that cortisone would decrease the excretion of 17-ketosteroids in cases of adrenogenital syndrome associated with adrenal cortical hyperplasia, and cortisone now constitutes the treatment of choice for this condition.

Feminizing tumors of the adrenal cortex may occur in men, although they are quite uncommon. To our knowledge, only 14 authentic cases of this type have been reported in the literature.

Mixed clinical pictures are encountered frequently. Tumors of the adrenal cortex may cause a single endocrine abnormality, such as diabetes, or they may be entirely nonfunctioning. If nonfunctioning, the tumor becomes known only by the presence of a gradually enlarging mass in the upper part of the abdomen on the right or left side and by the pressure symptoms which are produced.

Cushing's Syndrome.—Cushing's syndrome is the commonest clinical manifestation of excessive function of the adrenal cortices caused either by hyperplasia or tumor. It is seen oftenest in young women, but it also is encountered in men and, less often, in children. The general physical and cutaneous changes which develop when Cushing's syndrome occurs make for easy recognition of the patient who suffers from this condition (Figs. 1 and 2). Not all patients evidence pronounced changes, however, and corroborative laboratory data are helpful.



Fig. 1. Cushing's syndrome associated with adrenal hyperplasia. a. Prior to illness. b. Immediately prior to operation. c. Six months after subtotal adrenalectomy.

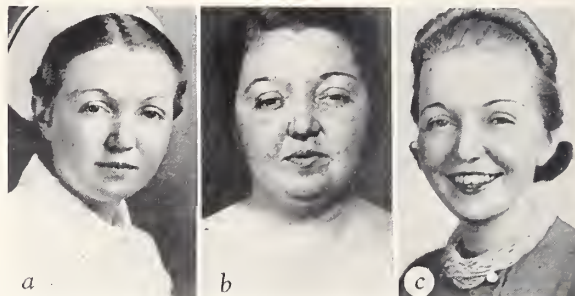


Fig. 2. Cushing's syndrome associated with cortical adenoma of the adrenal. a. Prior to illness. b. Immediately prior to operation. c. Nine months after operation. [Reproduced with permission from Priestley, J. T.: Lesions of the Adrenal Glands. S. Clin. North America, 32:1053-1064, (Aug.) 1952.]

Characteristically the patient with Cushing's syndrome shows a special type of obesity, manifested by a round, obese face (moon face); obesity of the neck and trunk, especially the abdomen, and deposition of fat in the cervicodorsal region termed "buffalo hump." The extremities actually may be wasted or at least appear so, in contrast with the trunk. Muscular weakness becomes increasingly severe.

Associated cutaneous changes include mild to moderate degrees of hirsutism. Acne of some degree is usually present on the face and often over the back and chest. A plethoric complexion uniformly develops and becomes easily noticeable. Purplish striae appear over the abdomen and at times also on the thighs and upper parts of the arms. Ecchymoses form on the extremities and may be prominent. The skin becomes thin.

Other changes may include amenorrhea in women and impotence in men. Hypertension of varying severity is noted, and psychiatric changes of varying severity are not uncommon.

Among the significant laboratory findings are: lowered values for chlorides and potassium in the blood, alkalosis, lymphopenia, lowered tolerance for glucose, alkaline urine and increased urinary excretion of corticosteroids. Excretion of 17-ketosteroids in the urine may be high, normal or low. Osteoporosis is often present and may result in one or more spontaneous fractures.

At present the treatment of Cushing's syndrome is more standardized than it used to be. Now it is

recognized that regardless of the basic etiologic factor in Cushing's syndrome, the disease process is mediated through hyperfunction or abnormal function of the adrenal glands. If a functioning tumor is present, it is removed; if none is present, enough adrenal tissue is removed to relieve the symptoms of hyperfunction. It is not usually known prior to surgical exploration whether the patient's symptoms are attributable to tumor or to hyperfunction without tumor. Thus, at the time of operation the surgeon must determine the pathologic process responsible for the patient's symptoms. After some experience, he usually can accomplish this without too much difficulty, since, fortunately, if a functioning adrenocortical tumor is present in one adrenal gland, the opposite gland is always atrophic (Fig. 3). On the other hand, if the patient's symptoms are the result of hyperfunction, the appearance of the adrenal glands is identical, and neither is atrophic. Under such circumstances these glands usually are enlarged. In some cases hyperfunctioning adrenal glands removed at operation have been four times as heavy as glands of normal size, but they may be of normal size and appearance. Inasmuch as the patient with Cushing's syndrome is often obese, an anterior surgical approach is not used. We generally use bilateral posterolumbar incisions, closing the first incision and turning the patient to the other side before making the second incision.

The surgical treatment of Cushing's syndrome currently is carried out in the following manner: If the evidence suggests that a tumor is present on one side, the adrenal gland on that side is exposed first. If a tumor is found, it is removed and no further operation is done. If, however, a tumor is not found on the first side and if this adrenal gland seems to be atrophic, the incision is closed and the

opposite adrenal is exposed with reasonable expectation of finding a tumor. It is then removed. If no tumor is found when the first adrenal gland is exposed, and if the gland is not atrophic, the surgeon assumes, provided he is completely satisfied with the preoperative diagnosis, that hyperfunction is responsible for the patient's symptoms, and he removes approximately 85 to 90 per cent of the gland, always attempting to preserve an adequate supply of blood for the portion of gland which remains. He then closes the incision and performs total adrenalectomy on the opposite side. It has been suggested that Cushing's syndrome be treated by bilateral total adrenalectomy, but so far we have used this procedure only in relatively few cases. It is possible that this point of view will change in the future.

In the surgical treatment of Cushing's syndrome, preoperative preparation and postoperative care are very important. Any electrolyte imbalance that exists should be corrected preoperatively, if possible. One must always be prepared to prevent the acute adrenal insufficiency which will occur immediately after operation if a functioning cortical tumor is removed; this insufficiency is owing to the atrophy of disuse present in the remaining adrenal gland. In addition, if most (85 to 90 per cent) of one adrenal gland is removed and if all the adrenal gland on the opposite side is removed, it is possible that an insufficient remnant of adrenal tissue has been preserved to prevent adrenal insufficiency, or that an inadequate supply of blood has been maintained for this remnant. Cortisone is given preoperatively to obviate the possibility of postoperative adrenal insufficiency. A satisfactory practice is to administer 200 mg. of cortisone acetate intramuscularly 48 and 24 hours prior to operation and also on the day of operation. As a rule this hormone is given postoperatively in decreasing doses. The rate of reduction of the dose is determined by the condition of the patient.

A delayed postoperative reaction develops, in many cases, after the surgical treatment just outlined. This reaction is characterized by anorexia, nausea, vomiting, weakness, tachycardia, fever, moderate drop in blood pressure, inanition, loss of weight and perhaps abdominal pain or discomfort. During this period, somewhat variable electrolytic changes may be noted in the blood. The administration of cortisone will prevent or control this reaction should it occur. If a functioning tumor has been removed, it is seldom necessary to continue the administration of cortisone for a prolonged period. However, for approximately half of the patients who have had extensive bilateral removal of adrenal tissue because of hyperplasia, as already outlined, it has been necessary to continue the administration of cortisone indefinitely after operation, in amounts of approximately 25 mg. daily.

The surgical treatment of Cushing's syndrome



Fig. 3. Cortical adenoma of the adrenal gland removed for Cushing's syndrome. A small segment of the opposite adrenal gland evidences definite atrophy.

has given universally favorable results if a functioning cortical tumor has been removed, provided the tumor was not malignant. Cushing's syndrome due to hyperplasia has likewise been successfully treated surgically, although incomplete remission or recurrence of symptoms has required reoperation in a small number of the earlier cases. Should this incidence of remissions rise as the postoperative length of life increases, it may prove advisable to perform bilateral total adrenalectomy in a higher percentage of patients. A variable period is required for remission of the disease and return of health after operation. This period is, in general, proportionate to the severity of the disease and the duration of its preoperative existence.

LESIONS OF THE MEDULLA

Tumors of various types can arise from the adrenal medulla. Neuroblastoma, a highly malignant tumor, is occasionally seen in children. The counterpart of this lesion in the adult, ganglioneuroma, is less malignant and offers a more favorable prognosis. Another type, pheochromocytoma, is usually a functioning tumor of the adrenal gland. This tumor will be considered here in some detail (Fig. 4).

Clinical Aspects.—Pheochromocytoma may produce paroxysmal or persistent hypertension. Par-

oxysmal hypertension associated with pheochromocytoma is characterized by attacks of hypertension in which one, or usually several, of the following symptoms occur: headache, anxiety, dizziness, sweating, palpitation, pain in the thorax or abdomen, flushing or blanching of the face, nervousness and tremor. While such attacks usually last for only 10 or 15 minutes, they may persist for several days or even longer. In some cases, pressure above a kidney may precipitate an attack. Persistent hypertension caused by pheochromocytoma may appear clinically to be identical with essential hypertension. Associated attacks also may occur. Children who have hypertension should always be suspected of having a pheochromocytoma. Such a tumor also should be suspected if the basal metabolic rate is elevated and if tolerance for glucose is decreased in association with sustained hypertension.

Fortunately, certain pharmacologic tests are extremely helpful in the diagnosis of pheochromocytoma, although unfortunately none is infallible. In general, these tests consist in the administration of certain drugs which may precipitate an attack of paroxysmal hypertension on the one hand, or may result in a pronounced fall in blood pressure, on the other hand, if the patient has persistent hypertension caused by pheochromocytoma. Hista-

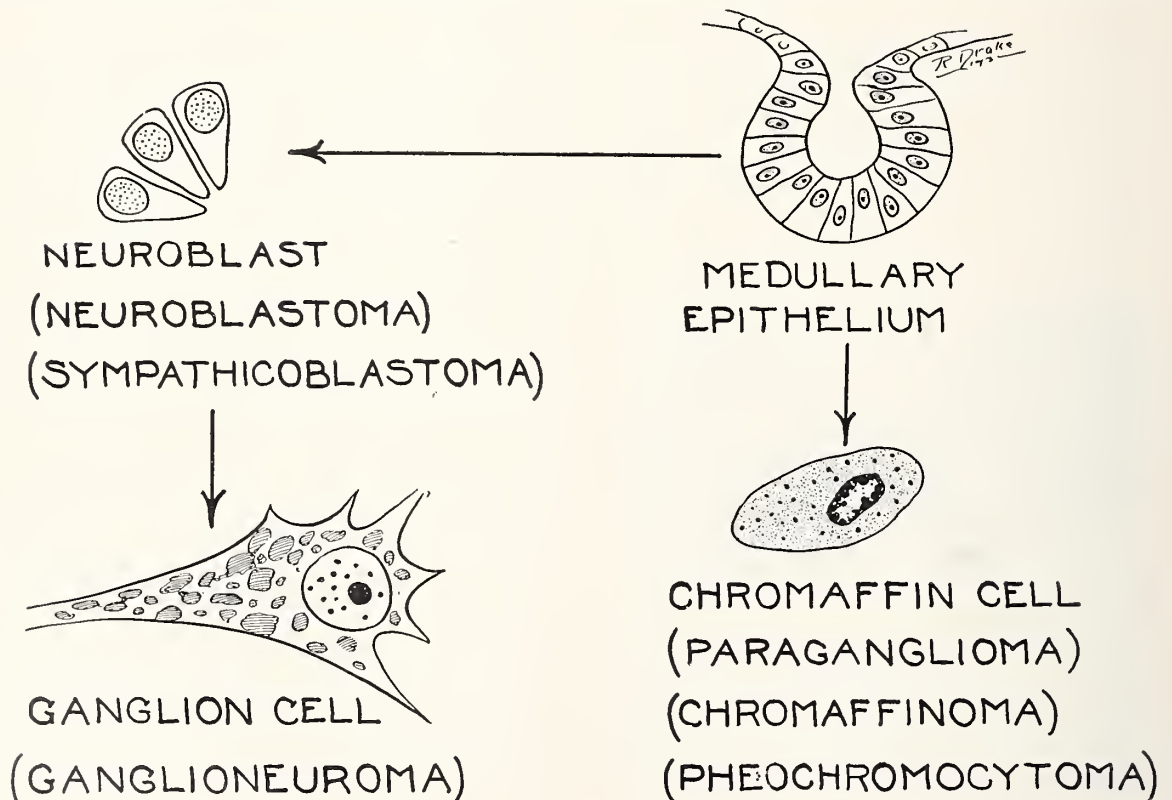


Fig. 4. Histogenesis of adrenal medullary tumors. [Reproduced with permission from Kvale, W. F., Roth, Grace M., Clagett, O. T. and Dockerty, M. B.: Headache and Paroxysmal Hypertension: Observations Before and After the Surgical Removal of a Pheochromocytoma. *S. Clin. North America*, 24:922-933, (Aug.) 1944.]

mine has given the most reliable results in the former category, but tetraethylammonium chloride and methacholine chloride also have been used. In the latter category, Regitine has been more dependable, but piperoxan hydrochloride and dibenamine also have been employed. Unfortunately, both false-negative and false-positive results may be obtained with any of these pharmacologic agents. The results must be interpreted with care, and the tests should be repeated if results are equivocal. If one leans toward the policy of making sure that certain of these tumors are not overlooked, it is reasonable to expect that occasionally a negative result will be obtained from exploration for pheochromocytoma. Current studies on quantitative estimation of epinephrine and norepinephrine in the blood and urine as well as determinations of urinary catechols may in the future prove helpful in the diagnosis of pheochromocytoma.

Surgical Considerations.—Certain pathologic aspects of pheochromocytoma must be appreciated if the proper surgical treatment of these tumors is to be carried out. It is true that pheochromocytoma usually occurs as a single, benign unilateral tumor, situated in an adrenal gland. Exceptions occur, however, for these tumors may be multiple, bilateral, malignant, or ectopic in location. Hence, it is necessary in every case to explore both adrenals carefully even though a tumor is found on exposure of the first gland, and it also is necessary to explore the abdomen in general and the retroperitoneal tissues along the aorta and the root of the mesentery in particular. Fortunately, the fact that patients who have a pheochromocytoma are uniformly thin facilitates an anterior approach through a transverse incision placed in the upper part of the abdomen. Such an incision readily permits careful exploration of the entire abdomen as well as of the adrenal glands. If a tumor is not found in the abdomen, then the possibility that there is one within the thorax or even the neck must be considered, provided the preoperative diagnosis appears to be correct.

Although the blood pressure commonly needs to be supported, removal of a pheochromocytoma need cause no fear of a postoperative adrenal cortical insufficiency such as that which occurs after removal of a functioning tumor of the adrenal cortex, and for this reason preoperative preparation with cortisone is not necessary. If, however, bilateral tumors are removed from the adrenal glands and if there is doubt whether or not it has been possible to preserve an adequate amount of adrenal tissue, vigorous measures to prevent acute adrenal insufficiency must be taken.

Changes which occur in blood pressure during operation for pheochromocytoma require special consideration. Almost invariably the blood pressure increases as anesthesia is induced and the incision is made. In fact, if this does not occur the

surgeon is inclined to doubt whether a pheochromocytoma is actually present. Since palpation and manipulation of these tumors causes a precipitous rise in blood pressure, these maneuvers should be kept to a minimum. The safe control of blood pressure during operation requires that both pressor and depressor drugs be readily available. Commonly, in order to facilitate prompt administration of drugs as desired, the slow intravenous administration of dextrose is started as anesthesia is induced. Regitine is most often employed to depress blood pressure if it rises too much. Norepinephrine is used to correct the pronounced hypotension which follows removal of the tumor. Usually, the administration of these agents, preferably by means of slow intravenous infusion, must be continued for several days postoperatively, especially if sustained hypertension existed preoperatively. If only paroxysmal hypertension occurred preoperatively, less prolonged administration is generally required.

Removal of a benign pheochromocytoma invariably gives good results. Paroxysmal attacks are eliminated, and persistent hypertension, if it has been present, is relieved unless it has existed for so long preoperatively that secondary cardiovascular changes prevent a complete return to normal. As a rule, if a malignant tumor is removed, the patient's condition may be expected to be improved for a period of time, if not permanently.

OTHER CONDITIONS

Bilateral total adrenalectomy or unilateral total adrenalectomy associated with subtotal removal of the opposite adrenal gland has been suggested in the treatment of essential hypertension, but there is insufficient evidence at the present time to indicate that this is a procedure of true clinical value. Subsequent to the work of Huggins and associates,^{2,3} both adrenal glands have been completely removed in selected cases of metastasis from carcinoma of the prostate and also from carcinoma of the female or male breast. Limited experience with this procedure, which perhaps should always be associated with bilateral oophorectomy, suggests that in some of these patients, worthwhile palliation has followed total adrenalectomy. Further study will be required to select the particular group of patients with these conditions in whom favorable results may be expected. At the present time, such treatment appears to remain in the stage of clinical evaluation.

It is becoming increasingly important to remember that any patient who has been given a significant amount of cortisone may evidence a certain degree of atrophy of the adrenal glands. The exact amount of cortisone that is required to produce atrophy of clinical significance is unknown at present. Likewise, the duration of such atrophy is difficult to predict. The important point to remember, however, is that if there is a possibility

of the existence of adrenal atrophy, a given patient who is to undergo a surgical procedure, even a minor one, should be prepared preoperatively in the same manner as though bilateral total adrenalectomy were to be performed. In addition, the administration of cortisone should be continued postoperatively, in decreasing doses, for approximately a week.

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The Prodromal Symptoms of Myocardial Infarction

HERMAN J. SMITH, M.D.*

DES MOINES, IOWA

AND

D. M. BUCHMAN, M.D.**

LA CROSSE, WIS.

THE RECENT DEATH of James B. Herrick recalls that it is less than half a century since that brilliant clinician first directed attention to the clinical features of coronary arterial obstruction with myocardial infarction.¹ The dramatic picture presented by the usual attack of coronary thrombosis has stimulated a steadily increasing interest in the problem by laymen as well as by physicians.

When myocardial infarction became a clinical rather than a postmortem diagnosis, it was orthodox teaching that the onset of this condition is "always abrupt; the patient may be well one minute and in agony the next."² The spectacular features of crushing chest pain, shock, collapse, and often sudden death so dominated the clinical picture that attention was at first diverted from other aspects of the problem.

LITERATURE

Soon, however, keen clinical observation began to elicit a history of prodromal symptoms from many of the victims. In 1925, Christian³ noted that "many patients give a story of preceding precordial distress ranging from very slight transitory discomfort, often interpreted as indigestion, to definite attacks of angina." Levine,⁴ in 1929, reviewed 145 cases and found that the majority had a preceding angina pectoris.

Attention was again drawn to the preliminary or premonitory pain by Feil⁵ and by Sampson and Eliaser,⁶ both reports appearing in 1937. Feil reported premonitory symptoms in 50 per cent of

his cases, and Sampson and Eliaser in 48.1 per cent.

By 1938, some 26 years after his first report, Herrick⁷ observed that myocardial infarction "may be ushered in by symptoms less startling and less frank than those first described," and at the same time, Bean⁸ found prodromal pain recorded in 21, or 16 per cent, of 135 cases in which notice had been taken of this symptom.

Two types of warning pain were described by Blumenthal and Reisinger⁹ in 1940. They remarked that while some patients exhibited the ordinary angina of effort as a prelude to infarction, 12 of 32 patients had spontaneous attacks of angina at rest, from one day to ten months before the climactic episode. A year later, Master and his associates¹⁰ used a special questionnaire to study 260 cases of myocardial infarction and found that 44 per cent had experienced premonitory symptoms, the most common of which were chest pain and fatigue or weakness.

Rathe,¹¹ in 1942, obtained a history suggestive of heart disease in all of a series of 274 cases of myocardial infarction. He noted that 32 per cent exhibited unusual fatigue for two to six weeks prior to the occlusion, and that in 37 per cent there was the complaint of a preliminary pain. This pain appeared an hour to a week prior to the infarction and was seldom as severe as that accompanying the actual occlusion. Rathe differentiated it from angina of effort, but observed that in the period immediately preceding infarction both angina of effort and dyspnea may develop upon much less exertion than previously. Waitzkin¹² reported premonitory symptoms appearing a few hours, days, or weeks before the actual attack, in 17 out of 61 cases.

* Consultant in Medicine, Veterans Administration Hospital; Chief, Medical Service, Iowa Methodist Hospital.

** Former Resident in Medicine, Veterans Administration Hospital, Des Moines.

THE PRESENT STUDY

The advent of anticoagulant medication has given new emphasis to the importance of early recognition of actual or impending myocardial infarction. Accordingly, the present study was undertaken in an attempt to evaluate the nature and incidence of the prodromal symptoms exhibited by many of these patients.

Parallel series, each including 50 consecutive cases of myocardial infarction, were examined from each of two hospitals. In each case, the diagnosis was established on the basis of clinical and electrocardiographic evidence or necropsy findings. The case histories and physical examinations had been recorded by a number of different house medical officers, with correspondingly variable emphasis on the events preceding and during the acute episode.

Results are summarized in Table I. Of the 100 cases in the combined series, 48 per cent gave a history of premonitory distress appearing from one day to three months before the clinical picture of myocardial infarction developed. In only two of these 48 cases did the warning symptoms appear more than six weeks before the attack, one of these patients having noted unusual dyspnea three months earlier, and the other having developed the same symptoms two months before. Eighteen of the patients gave a previous history of angina for a few months to fifteen years preceding the attack, and five had sustained previous episodes of myocardial infarction from four to twelve years earlier.

TABLE I

	Meth. Hosp.	V.A. Hosp.	Combined Series
Total cases	50	50	100
Number with prodromes	23	25	48
Previous history of angina	7	11	18
Previous infarct	3	2	5

Preceding cardiac history in patients exhibiting prodromal symptoms.

The most frequent warning of an impending cardiac catastrophe (Table II) was the sudden onset of anginal pain. This symptom appeared in 21 of the 48 cases, and was present for one day to six weeks before infarction occurred.

TABLE II

Prodrome	Meth. Hosp.	V.A. Hosp.	Combined Series
Change in character of angina	5	10	15
Angina decubitus	4	10	14
Sudden recent onset of angina	11	10	21
Dyspnea, recent onset	8	8	16
Epigastric pain, recent	3	2	5

Nature of prodromal symptoms noted by 48 patients.

The angina was frequently atypical. One patient had a ten-minute attack of pain while lying in bed,

24 hours preceding the severe episode considered typical of infarction. Another had complained so bitterly of pain in the neck and jaw for a month that he was placed in a sanatorium for psychiatric observation. Only after he collapsed with a classical attack of myocardial infarction did a more careful clinical history disclose that his jaw pain had been produced not only by emotional upsets but also by physical exertion.

Another patient, with non-specific abnormalities in his electrocardiogram for 14 years, had three attacks of substernal pain lasting from one to six hours during the month preceding his infarction. A 51-year-old man suddenly developed angina of effort one week before admission and angina decubitus one day before admission; his electrocardiogram remained normal until 18 days after admission, when he developed the typical clinical and electrocardiographic picture of infarction.

Somewhat unexpectedly, the second-commonest symptom heralding the approach of an acute infarction was the appearance of unusual dyspnea on exertion. This was noted by 16 patients, and appeared as long as three months before the infarction. In only one patient was it associated with congestive heart failure. Cough appeared with the dyspnea, however, in three of the 16 cases. A 72-year-old woman, who had had rheumatic fever at the age of 27, abruptly developed both angina and exertional dyspnea 48 hours before infarction occurred.

In 15 patients with a previous history of angina pectoris on exertion, a change in the character of the angina took place from one day to six weeks before infarction was evident. The attacks of anginal pain lasted longer, were no longer relieved by nitroglycerin, or for the first time radiated to the arms or to the epigastrium. In eight of these patients, angina decubitus developed. A 69-year-old male with a six-month history of angina on exertion had a severe hypothyroidism with a basal metabolic rate of minus 42 per cent and a blood cholesterol of 640 milligrams per cent. Despite an almost complete physiological thyroidectomy, he developed angina decubitus one month before a fatal myocardial infarction. At autopsy, the severe narrowing of the coronary vessels by atherosclerosis explained why even the minimal circulatory requirements could not be met without anginal pain.

Epigastric pain appeared as the first warning symptom in six patients. Two had a history of previous angina pectoris. One patient noted that nitroglycerin relieved his epigastric distress.

DISCUSSION

There is by no means universal agreement on the mechanism by which partial or complete occlusion of a coronary artery takes place. As early as 1923, Wearn¹³ reported that in 15 out of 16 autopsies showing occlusion of the anterior ramus descendans, the thrombus was situated on the site of a contracture due to atheroma; in the other,

the vessel was constricted by atheroma, but there was no thrombus. Leary's¹⁴ classical contribution differentiated two mechanisms for the production of coronary obstruction: in the younger age group, subendothelial phagocytosis of lipids, stimulating fibrosis and thus narrowing the lumen so that thrombosis was the usual terminal event; and in the aged, absence of fibrous reaction, liquefaction of the masses of lipids, and terminally the rupture of one of these atheromatous "abscesses" into the arterial lumen.

Paterson¹⁵ laid the foundation for another approach to the mechanism of coronary occlusion when he reported that coronary atherosclerosis is characterized by vascularization of the intima, followed by hemorrhage into this layer of the artery. He found the development of discrete capillaries "which are peculiar in that they are in direct communication with the lumen of a large artery in which the pressure of the blood, even if normal, is relatively high." If alteration in blood flow from narrowing of an artery by atheroma were the only factor in producing thrombosis, Paterson said, the disease would be much more common than it is. "It seems probable," he said, "that damage to the endothelium at a vulnerable point is also needed." He reported nine consecutive cases of recent coronary thrombosis in which autopsy showed hemorrhagic lesions occurring in atheromatous foci within the intima. Winternitz¹⁶ also has emphasized hemorrhage derived from the intramural circulation as an important element in the development of atherosclerosis.

One of the cases reported by Blumenthal and Reisinger⁹ had complained of spontaneous attacks of angina for nine months before a fatal myocardial infarction. Autopsy showed impingement on the lumen of the right coronary artery by a mixed atheromatous and hemorrhagic lesion within the arterial wall, with two points of communication between the lumen and the intramural arterial lesion. Superimposed on this lesion was a fresh thrombus. These authors believed that intramural hemorrhage, with the formation of minute dissecting aneurisms, is a frequent occurrence in the coronary arteries.

Hemorrhage into the wall of a coronary vessel may be sufficient to occlude the lumen even without thrombus formation. Wartman¹⁷ found this second only to thrombosis at the site of atherosclerosis as a cause of coronary occlusion, and confirmed Paterson's work on the origin of intimal capillaries from the lumen of a sclerotic artery. It is interesting that in 48 per cent of the vessels he studied by serial section, Wartman found intramural hematomas to be a sole or contributing factor in the occlusion, a figure closely approaching the incidence of prodromal symptoms reported in this and two other^{5, 6} series.

Master and his associates¹⁰ likewise emphasize the frequency of hemorrhage into an atheroscle-

rotic plaque in the production of coronary arterial occlusion, and suggest that the onset of premonitory symptoms is associated with such an episode which suddenly narrows but does not entirely block the lumen. Boyer²⁰ agrees that the presence of prodromal symptoms probably depends on the rate at which the occlusive process in the coronary vessels develops.

If there is to be any clinical advantage from early recognition of impending myocardial infarction, measures must be available to forestall a critical diminution of the blood and oxygen supply to the heart muscle. The Blumgart group^{18, 19} concludes that "the exact pathologic mechanism of narrowing or occlusion . . . is beyond determination by clinical means," and earlier workers⁶ report that of 13 patients put to bed with what were thought to be premonitory symptoms, seven developed infarction and six did not.

Reduction of cardiac work is the most obvious approach to cases thought to be in imminent danger of infarction. Rathe¹¹ believed that in those cases where he recognized the preliminary pain, rest and sedation did spare the patient some suffering and shock, although infarction was not averted. Boyer²⁰ cited evidence that effective collateral circulation requires one to three weeks for its development, and suggested two to four weeks in bed.

Master¹⁰ believes that "once the occlusion has commenced to form, its progression to complete obstruction . . . cannot be prevented," but thinks that bed rest "immediately following the onset of premonitory symptoms may decrease the severity of the symptoms and of heart failure following complete occlusion." Waitzkin,¹² on the other hand, felt that it is debatable whether the severity and mortality of infarction can be minimized by such measures.

That rest itself predisposes to thrombosis is discounted by most observers,^{17, 18, 19} but there is general agreement that post-operative states seem to be significant in precipitating an infarct.

There is agreement, also, that slowly developing obstruction of the coronary vessels permits establishment of more adequate collateral circulation.^{20, 21} Sampson and Eliaser⁶ noted the relatively low mortality of infarction in patients with premonitory symptoms, and this observation was confirmed a quarter of a century later by Zoll and his associates.²¹ In the present series, only six deaths were recorded among 48 patients with warning symptoms, a rate of 14.2 per cent.

A second approach to the problem of averting an impending infarction lies in the use of the newer agents for influencing the clotting of the blood. Here, however, the physician finds himself impaled on the horns of a therapeutic dilemma. Shall he attempt to forestall thrombosis by administering anticoagulants, and thereby increase the risk of hemorrhage into the wall of the coronary

artery?^{22, 23, 24} Or shall he, as Doles²⁵ suggests, administer large parenteral doses of vitamin K as a safeguard against intramural coronary hemorrhage, and thus perhaps invite thrombus formation within the narrowed lumen?

Two of the cases admitted late in our series were thought to have impending infarction. One was a 57-year-old male who had sustained a previous infarction 12 years earlier. He had suffered from angina pectoris for ten years. There had been an abrupt increase in the duration and severity of his pain for six days before admission, and he had had angina decubitus for one day. He was given dicumarol during 21 days of hospitalization, and neither clinical nor electrocardiographic evidence of a fresh infarct developed. He died suddenly several months after his discharge from the hospital.

The second patient, a 51-year-old male, had been well until a week before admission, when exertional angina appeared. Angina decubitus developed one day before admission. His electrocardiogram was normal. He was given dicumarol, but on the eighteenth day after admission developed clinical and electrocardiographic evidence of infarction, from which he recovered.

Until better clinical criteria are available to differentiate between intramural hemorrhage and thrombosis in the coronary vessels, the use of anticoagulant medication in attempting to avert myocardial infarction must remain largely empirical. The difficulty of evaluating results is obvious, since not every patient with prodromal symptoms will develop an infarction, regardless of what is or is not done by the physician. The more attention that is given to the details of the clinical history, however, the higher is the percentage of cases of myocardial infarction in which a story of warning symptoms can be elicited. This has been the experience with our own house officers.

SUMMARY

1. Clinical histories of 100 consecutive cases of myocardial infarction, 50 from each of two hospitals, were studied for evidence of prodromal symptoms.

2. In 48 per cent of these cases, warning symptoms were noted from three months to one day before the clinical picture of infarction appeared. In order of decreasing frequency, these symptoms were: sudden onset of anginal pain, unusual dyspnea, and an abrupt change in the character of a previously existing angina pectoris.

3. The pathology of coronary arterial occlusion is briefly reviewed with relation to the use of newer drugs affecting blood clotting. Therapeutic implications are discussed.

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AMA COMMITTEE WILL CONDUCT SURVEY

The AMA Committee on Medical Practices has engaged the firm of Rollen Waterson Associates to conduct a pilot study covering several controversial issues (joint billing, methods of payment of an assistant, collection and distribution of fees by a third party, commissions and rebates) and the allied problems of excessive fees, ghost surgery, and unjustified medical and surgical procedures. Dr. Stanley Truman, of Oakland, California, chairman of the Committee, in making the announcement said the firm's work would be directed principally at discovering the underlying reasons for those practices, both psychological and economic.

Myocardial Infarction as Treated at The Iowa Methodist Hospital

A Five-and One-Half-Year Study

DAVID BARIDON, JR., M.D.*

AND

HAROLD MARGULIES, M.D.**

DES MOINES

BECAUSE REVIEW STUDIES and statistical analyses of the treatment of myocardial infarction, like those dealing with many other entities, emanate almost exclusively from large clinics or public hospitals, clinicians often are mistaken in attempting to use the available figures in evaluating their private-hospital practices, ones which, in general, consist of patients whose courses can be more accurately followed and more personally supervised. Thus, in spite of the fact that since 1912, when J. B. Herrick first adequately described the clinical picture of acute myocardial infarction,¹ the literature has been flooded with material on coronary-artery disease, the dearth of information on patients treated in private teaching hospitals not affiliated with medical schools made us think such a study at Iowa Methodist Hospital would constitute a worthwhile service to attending physicians there and at similar institutions.

MATERIAL

All charts containing the diagnosis myocardial infarction, coronary occlusion, coronary thrombosis, or cardiac infarction, from July, 1947, through December, 1953, excluding the calendar year 1951, were reviewed. This represents a total of 5½ years' time. The charts were very carefully screened to include only cases about which there could be virtually no doubt as to the validity of the diagnosis. This precaution obviously resulted in the exclusion of many true infarctions, but it made the data obtained more accurate and, hence, more usable. Except when specified, patients who died within 24 hours after admission were omitted because they were moribund on admission and, therefore, neither left doubt as to prognosis nor gave therapy a fair trial. In addition, the work-ups on many of those patients were, of necessity, too meager to lend themselves to study.

Of the patients surviving 24 hours or more, only those were included who had electrocardiographic

evidence of infarction plus a history compatible with the condition plus some clinical evidence in the course of hospitalization, such as fever, leukocytosis or elevation of the sedimentation rate. The senior author, an attending cardiologist, carefully reviewed each electrocardiogram in the light of the history and findings in the case. The electrocardiogram interpreter usually is at a tremendous disadvantage in knowing little or nothing of the patient's clinical condition. Thus, such a correlation is advisable in all instances, and we considered it essential for the production of a worthwhile paper. Only two cases were included in which conduction defects masked the infarction pattern. We felt justified in including them because of the classical histories and clinical courses in both instances.

Autopsy proof of acute infarction, of course, obviated critical examination of other aspects of those cases. Autopsy reports on 50 patients, including several first-day deaths, were analyzed.

The terms *anticoagulant* and *dicumarol* are used synonymously in this series.

Finally, no attempt has been made to give a complete bibliography, or even to compare all items herein discussed, point for point, with published reports. Rather, we have undertaken merely to tabulate the experience with myocardial infarction at this hospital.

DATA AND CONCLUSIONS

Of the 565 charts reviewed, then, 327 fulfilled the above-outlined criteria, and on that number was based most of the following material. Table 1 shows that from the 327 cases there were 63 deaths, or an overall mortality rate of 19.3 per cent. When only first infarctions were considered,

TABLE 1

	Cases	Deaths	% Deaths
Cases analyzed	327	63	19.3
1st. Infarction	266	39	14.7
2nd. Infarction	52	21	40.4
1st. Day Included	352	88	25.0

* Dr. Baridon, an intern at Iowa Methodist when this study was made, is now a resident in pathology at the Mayo Clinic, Rochester, Minnesota.

** Dr. Margulies, an internist, is a staff member at Iowa Methodist Hospital and engages in private practice in Des Moines.

the mortality rate dropped to 14.7 per cent, i.e., 39 deaths from 266 cases. Fifty-two of the cases were second infarctions, with 21 deaths for a rate of 40.4 per cent. If we were to include the additional 25 proved-infarction patients who died within the first 24 hours of their hospitalization, we would report 88 deaths from 352 admissions, or a death rate of 25.0 per cent. Death rates in the literature vary from 8 to 30 per cent.

It is of some interest to note the reasons for our rejecting the 238 discarded cases. Approximately one-fifth of those rejected, or 45 cases (Table 2) were patients who died within 24 hours of admission and without confirmation of the diagnosis in accordance with the rather rigid requirements.

TABLE 2

Reason for Rejection	Cases	Per Cent
Less than 24 hrs. without confirmation	45	18.9
Less than 24 hrs. with confirmation	25	10.5
In more than 24 hrs. without ECG being done	16	6.7
In more than 24 hrs. without ECG confirmation	106	44.5
Mislabelled	46	19.3
	238	99.9

Twenty-five, or approximately 10 per cent, of the rejections had the diagnosis confirmed but were hospitalized less than 24 hours. Sixteen, or approximately 7 per cent, who were hospitalized for more than 24 hours had no electrocardiographic tracings. The largest group, 106 cases representing 45 per cent of the rejections, were patients each of whom was hospitalized more than 24 hours and who had an ECG study that failed to confirm the diagnosis. Finally, a number of charts were mislabelled: 46 cases, or approximately 20 per cent. Most of those were ancient infarctions, but a fair number were cerebrovascular accidents, and a few were miscellaneous disease states such as ruptured aortic aneurysms and other obvious oversights. With the object of reducing mortality rates, consideration is often given to the usefulness of anticoagulants in lowering the incidence of thrombo-embolic phenomena and the propagation of coronary thrombi. Our cases were divided into three categories as regards anticoagulants: namely, those in which they were used in adequate amounts, those in which they were used inadequately, and those in which none were given. Wright's criterion² of a 30 per cent or less prothrombin activity level as a basis for adequacy of dicumarolization was used, plus the immediate administration of the drug and its continued usage until the patient was ambulatory.

In our series of 327 cases, as Table 3 indicates, no anticoagulants were used in 198, and 34, or 17.2 per cent of them, died. Of 129, the total number of patients on whom anticoagulants were used, 26, or 20.1 per cent, died. These findings appear to

discredit the use of anticoagulants, yet the figure 26 is too low to make this data valid for statistical analysis, and besides, the odds overwhelmingly favor the possibility that the 2.9 difference between 17.2 and 20.1 per cent is due to chance.

TABLE 3
ANTICOAGULANTS

	Cases	Deaths	Per Cent
None used	198	34	17.2
Total used	129	26	20.1
Used inadequately	73	19	26.0
Used adequately	56	7	12.5
Minus 2nd-day deaths	54	5	9.3

The increase in mortality to 26 per cent in that group of 73 patients in whom inadequate anticoagulants were used may be due either to selection of the more critical patients for their use, to a false sense of security on the part of the physician and the patient that resulted in too early activity, or to a deleterious effect of the drug on the patient. That the last of these possibilities should have been the only effective one is extremely unlikely, since demonstrable complications from dicumarol therapy have been virtually non-existent. In addition, one doubts that a widely used drug such as dicumarol can cause any great harm when given in inadequate therapeutic doses. As to which of the other two possibilities is more likely to have been principally responsible, we will not hazard a guess.

Unfortunately, the group of patients on whom dicumarol was used in adequate dosages was small. There were only 56 such cases, among whom 7 deaths took place, a mortality of 12.5 per cent. If we were to discard the two cases in this small group who expired in their second 24 hours of hospitalization, the death rate would drop to 9.3 per cent.

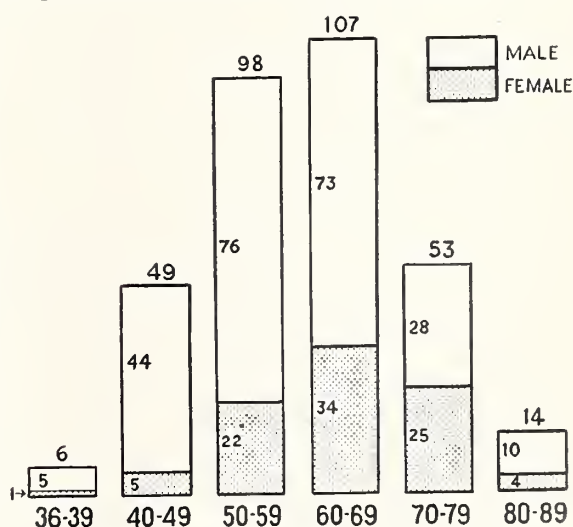


Fig. 1. Age and sex distribution of patients.

In his series of 800 cases, Dr. Wright² claimed a reduction in death rate from 23 to 13 per cent by adequate use of anticoagulants. He also stated that thrombo-embolic phenomena were reduced from 19 to 9 per cent in the same series.

The age and sex distribution by decade is represented graphically in Figure 1. It is to be noted that the peak incidence is in the seventh decade, with the sixth a close runner-up. Without regard to sex, the median age was 64 years, the mode was 65 years (at which age there were 16 patients), and the average age was 58.2 years. Our youngest patient was 36 years of age, and there were six patients under the age of 40 years. Our oldest patient was 89, and there were 14 in the ninth decade. Observe also that, generally, as age increases the percentage of females increases, the eighth-decade group being virtually half females. These data are in accord with generally accepted figures.

TABLE 4
SEX

	Cases	Per Cent
Male	235	71.9
Female	92	28.1
Male deaths	41	17.4
Female deaths	22	23.9

Of our 327 cases, 235, or approximately 72 per cent, were males, and 92, or approximately 28 per cent, were females (Table 4). There were 41 deaths in the male group, for a mortality rate of 17.4 per cent. In the female group, 27 deaths constituted a 23.9 per cent mortality rate. It is, of course, commonly taught that myocardial infarction is much less frequent and attended with a higher mortality rate in females.

TABLE 5
INTERNIST VS. NON-INTERNIST

	Cases	Per Cent
Internist	222	68.1
Non-Internist	105	31.9
Deaths Internist	36	16.2
Deaths Non-Internist	27	25.7

Approximately two-thirds of the cases were predominantly managed by internists and one-third by non-internists (Table 5). The death rate in the former group was 16.2 per cent, and in the latter 25.7 per cent.

One notes in Figure 2 a definite seasonal variation in incidence, late spring and early summer having the lowest incidence, with an increase as the snow begins to fall and a culmination in a spring peak, February having the highest incidence. Whether the implication that the March 15 income-tax deadline has something to do with the figures is conjectural, but a control group will be forthcoming when the deadline is changed to April 15, and we shall see. It is usually assumed that

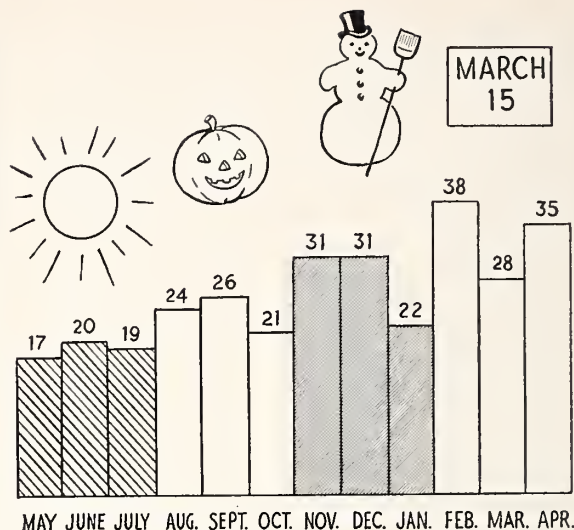


Fig. 2. Averages of admissions by months.

the seasonal variation is as we found it. This was true in Los Angeles;³ however Master,⁴ in Boston, and Katz,⁵ in Chicago, cities with climates approximating ours, both denied significant seasonal variation, and a study in Dallas, Texas,⁶ showed a definite summer-month increase.

During the tabulation of data, a few interesting observations were made. Hypertension, found in only 27 per cent of the cases, was surprisingly infrequent in our series, and our figure is not reliable because of the lowering of blood pressure with the acute phase of the infarction, the occasionally found failure of blood pressure to return to pre-infarction hypertensive levels, and the lack of discharge blood-pressure readings on survivors.

TABLE 6
COMPLICATIONS

	Cases	Per Cent
Hypertension	90	27.3
Diabetes	27	8.3
"Silent Coronaries"	8	2.4
Neck or Jaw Radiation	43	13.1
Epigastric pain	7	2.3
Syncope	7	2.3

In addition, undoubtedly, many of the deceased had pre-infarction hypertension, but the blood pressure rarely became elevated to hypertensive levels afterward.

Myocardial infarction occurs more frequently in diabetics than in the general population. We had 27 cases, or 8.3 per cent, in the diabetic group.

True "silent coronaries," by which we mean acute myocardial-infarction cases without chest pain, are uncommon. We found only 8 such cases, representing 2.4 per cent of the entire group.

Radiation of pain to the neck and jaw regions, on the other hand, was noted in 43, or 13 per cent of the cases. In one patient the radiation was to a tooth, simulating dental pain.

Epigastric pain, which could have been confused with peptic ulcer or gall-bladder disease, was found in only 7 cases, or 2.3 per cent.

This same low incidence was found for syncope, which some think is common. However, it would seem that the diagnosis of myocardial infarction in the presence of syncope should be made with reservation.

TABLE 7
HOSPITAL STAY

Average	28.5 days
Median	25 days
Mode	42 days

The patients had an average hospital stay of 28.5 days, a median of 25 days, and a mode of 42 days. Figure 3 is a breakdown by hospital day of the 88 deaths, including those on the first day.

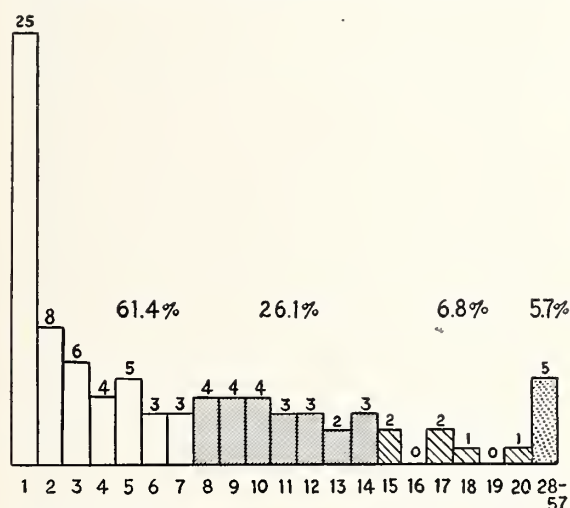


Fig. 3. Fatalities (88 in all) expressed in terms of days of hospital stay.

Twenty-five, or 28.4 per cent, of the deaths occurred in the first hospital day. In 61.4 per cent of the cases, death occurred during the first week. The first and second weeks included seven-eighths of the deaths, 26.1 per cent occurring in the second week. During the third week, there were an additional 6 fatalities, or 6.8 per cent. It is interesting to note that 5 deaths, or almost 6 per cent, occurred after the 21st day, when patients are usually assumed to be out of danger and when a great many of the survivors have been discharged.

The remainder of this paper will deal with pathologic findings in 50 postmortem examinations from the grand total of 88 deaths. Thrombo-embolic phenomena were encountered in 21, or 42 per cent, of the autopsied cases. In no one of these had adequate amounts of dicumarol been used, and it had been used inadequately in only 4 cases. Mural thrombosis of the left ventricle—seen in 15 cases, or 30 per cent—was the commonest finding. All other locations were relatively infrequent sites, as is to be seen from Table 8.

TABLE 8
THROMBOEMBOLIC PHENOMENA

	Cases
Left ventricle	15
Right ventricle	3
Pulmonary artery	3
Abdominal aorta	2
Right atrium, left atrium, small intestine, brain, lower extremity, pancreas	1 each

All of the hearts examined were heavier than normal, as was to be expected because of associated hypertension. Table 9 shows that the average heart weight for the 33 males was 465 grams, as opposed to the normal average of approximately 300 grams.⁷ The 17 female patients had virtually the same heart-weight average, indicating more hypertrophy on their part, for the average normal adult female heart weight is approximately 250 grams,⁷ or 50 grams lighter than the male.

TABLE 9
HEART WEIGHTS

	Cases	Av. Weight
Males	33	465 Gm.
Females	17	464 Gm.

Rupture of the myocardium, as proved by hemopericardium, occurred in 8 cases, or 16 per cent (Table 10). This is a higher incidence than is reported elsewhere. At Los Angeles County Hospital,⁸ spontaneous rupture was reported to have occurred in 8.3 per cent of 865 cases. We had an additional case of interventricular septal rupture which, if included, would raise our percentage to 18. Spontaneous rupture is more likely to occur in small, non-scarred hearts. This fact is borne out by an average weight of only 388 grams in our series of 8 ruptures, as compared to a 465-gram average for all 50 autopsied hearts. Also, in the entire autopsied group only about one half the patients succumbed to their first infarction, as compared to 78 per cent of those in whom rupture occurred with the first infarction.

TABLE 10
CARDIAC RUPTURE

	Number	Per Cent
Rupture with hemopericardium	8	16
1 interventricular septal	9	18
1st infarction in all fifty cases		54
1st infarction in ruptured cases		78

Average weight of ruptured heart 388 grams

Because of the time required for the myocardium to weaken sufficiently to rupture after an acute infarction, it is usually taught that rupture occurs between the fourth and fourteenth days. Table 11 indicates that 4 patients ruptured within one day after the onset of classical symptoms and that 7 of the 9 did so before the fourth day. To

repeat, consideration was given to days after onset, not to days after hospital admission, although this was the same day in almost all cases in the entire group. We conclude, then, either that it takes only a few hours for the myocardium to become weakened enough to rupture, or that we are accustomed inaccurately to correlate onset of symptoms with time of anatomical infarction.

Two cases of ventricular aneurysm without rupture were encountered.

TABLE 11
DEATHS AFTER CARDIAC RUPTURE

1st day after infarction	4
2nd day after infarction	2
3rd day after infarction	1
5th day after infarction	1
13th day after infarction	1

Some people feel that concomitant gastro-intestinal pathology is uncommon, but Table 12 shows that 42 per cent of the autopsied cases in our series showed gastro-intestinal lesions. There were 15 cases of diverticulosis—approximately the same as in the general population of this age group. There were 3 cases of diverticulitis. There were 3 ulcers, one of them acute duodenal, one chronic duodenal, and one acute gastric with hemorrhage. And there were 5 carcinomas of the bowel; one adenoma of the colon; one benign polyp of the

TABLE 12
GASTRO-INTESTINAL FINDINGS (21 patients, 42 per cent)

Diverticulosis	15
Diverticulitis	3
Ulcers	3
(one each: acute D.U.; chronic D.U.; acute gastric with hemorrhage)	
Carcinomas of bowel	5
Adenoma of colon	1
Polyp of colon	1
Acute gastritis	1

colon; and one acute gastritis. In two of the carcinomas of the bowel, the myocardial infarction was considered secondary.

Since anticoagulants have been incriminated for making the anatomical lesion more severe or actually causing it, we wish to make one final point regarding hemorrhage into coronary atheromata producing subsequent occlusion. A careful study of the gross and microscopic descriptions of all 50 patients revealed only two cases of hemorrhage into atheromata. One patient died of cardiac rupture three days after infarction, after having been started on acceptable doses of dicumarol. The other patient died within 24 hours after onset of symptoms of his fourth infarction, without having received anticoagulants.

SUMMARY

The experience with myocardial infarction at the Iowa Methodist Hospital for a period of 5½ years ending January 1, 1954, has been discussed. Included was an analysis of postmortem examination findings in 50 cases.

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U of M Offers Short Course and North Woods Vacation

A three-day conference on "Psychiatric Principles in General Practice" is to be offered by six members of the faculty in psychiatry at the University of Minnesota Medical School, with Dr. Bernard C. Glueck, Jr., psychoanalyst, of Columbia University and the New York State Department of Health, on Wednesday, Thursday and Friday, September 8, 9 and 10, 1954, in Itaska State Park, 230 miles northwest of the Twin Cities.

The planning committee for this course intended that during the day the registrants would want to work hard trying to assimilate all of the information possible, but that they should be allotted a certain amount of time for recreation. At Douglas Lodge, where the sessions will be held, there are

a swimming beach, trails through the woods for hiking, boats for fishing and a launch for rides on Lake Itaska. In addition, there will be informal, optional programs during the evenings. All of the accommodations are uniformly comfortable. Enrollment is limited to 50, and the registrants will be transported from the Minneapolis campus to Lake Itaska and back in a group.

The fee of \$130 covers tuition, lodging, meals, instructional material and transportation. The University has put itself out on a limb by offering even to supply fishing licenses at no extra cost.

Inquiries should be addressed to the Director, Division for Continuation Study, University of Minnesota, Minneapolis 14.

Current Concepts of Carbohydrate Metabolism and Diabetic Acidosis

PAUL FROM, M.D.*

DES MOINES

IN 1921 BANTING and Best, at the University of Toronto, isolated the internal secretion of the pancreas and in 1922 introduced insulin into clinical use. During the ensuing three decades, the study of diabetes in man and experimentally produced diabetes in animals has furnished a wealth of information on metabolism and all other bodily functions. The discoveries of Banting and Best culminated study on a subject which was perhaps first mentioned in the Egyptian Papyrus Ebers (*circa* 1552 B.C.). The findings regarding beta-hydroxybutyric acid and acetoacetic acid in diabetic urine were a further addition, and still later came some understanding of the role of protein catabolism in glucose formation.

It is an interesting phenomenon that a normal person can ingest several hundred grams of carbohydrate per day without a rise in his blood sugar above 160 mgm. per cent, and can be on a diet free of carbohydrate for several days without his blood sugar's dropping below 70 mgm. per cent. Thus a normal person can vary his intake of carbohydrate from 0 to 500 grams per day, and yet his blood sugar will not vary over 90 mgm. per cent.

When one ingests food, the processes of digestion break it down into the three simple sugars (glucose, fructose, and galactose) and into amino acids which later may become glucose. These monosaccharides are rapidly absorbed from the small intestine, even against a concentration gradient. The cells of the intestinal mucosa also have a selective action upon these monosaccharides so that the different sugars have different rates of absorption, galactose being absorbed most rapidly and fructose least. The maximum rate of absorption of glucose is 43 grams per hour. Also, the amount of glucose transferred across the gut will be within the assimilatory capacity of the tissues. The rate of absorption is decreased if the hypophysis be removed (and can be then increased with thyroxin), is decreased if hypothyroidism (idiopathic or acquired) be present, and is increased in the presence of hyperthyroidism. Diet will affect the rate of absorption, with the fastest rate of absorption occurring in those on a high-carbohydrate diet and slowest in those previously on a low-carbohydrate diet.

* From the Department of Internal Medicine, Veterans Administration Hospital, Des Moines, Iowa.

Sponsored by the Veterans Administration with the approval of the Chief Medical Director. Statements and conclusions by the author are a result of his own study and do not necessarily reflect the opinion or policy of the Veterans Administration.

As we shall understand later, the study of metabolism of these carbohydrates is in actuality a study of the metabolism of glucose, since fructose and galactose are readily transformed into glucose after absorption.

When one ingests carbohydrate, the following changes occur. There is an increase in liver glycogen, an increase in muscle glycogen, an increase in soft-tissue glucose, and a transient rise in blood sugar. Some of the glucose oxidizes, and some forms fatty acids. Also, blood pyruvate rises, phosphate and extracellular potassium decline, and serum phosphate falls about 25 per cent.

Glucose from the blood is deposited as glycogen in the liver and muscles. The liver serves as a site of temporary storage, and the glycogen in the liver is broken down when required to provide blood glucose (glycogenolysis). Indeed, in the hepatectomized animal the blood sugar falls rather quickly to zero. The glycogen stored in the muscles can serve as a source of blood glucose only indirectly, through the formation of lactic acid which may be transformed to glycogen in the liver. Under control of the adrenal cortical hormones, the liver also can transform non-carbohydrate material into glucose (gluconeogenesis).

The proximal kidney tubules, because they play an important role in glucose metabolism, also deserve mention here. The tubules specifically reabsorb glucose from the glomerular filtrate, the rate of reabsorption being affected like the rate of absorption through the gut. The maximum absorptive capacity is influenced by continued high exposure levels ("raised renal threshold of diabetes") and by the endocrines, in that there is increased reabsorption in hyperthyroidism and decreased reabsorption in the presence of the adrenal steroids and phloridzin. By some mechanism, glucose can be formed in the kidney, but the importance and the amount of that production are not yet well understood.

In Figure 1 are shown the steps involved in the breakdown and disposition of glucose. The change of glucose to glucose-6-phosphate is irreversible. Glucose, as such, is metabolically inert, and it is its phosphorylation which renders it active in the body. Various possibilities are opened up for glucose, once it has been phosphorylated. It may be stored as glycogen in the liver and later may serve as a source of blood glucose. It may be stored as glycogen in muscles and be available for energy. It

may at once or later be broken to the level of pyruvic acid (Embden-Meyerhof cycle). It may be transformed to fatty acid and be stored or utilized. In all of these transformations, enzymatic reactions—usually of a reversible nature—are concerned. Under normal conditions the breakdown of glycogen proceeds through successive steps, ending in carbon dioxide and water.

The tricarboxylic cycle (Figure 2) offers several points at which the metabolic pathways of carbohydrates, proteins, and fats converge in a rather integrated fashion. It is estimated that, in terms of a machine, the body has an efficiency of 67 per cent in converting glucose into energy by means of this mechanism.

As previously mentioned, the blood level of phosphate declines as glucose enters the metabolic pool—i.e., as the phosphate is used in the phosphorylation of glucose. As the phosphorylated derivatives are oxidatively disposed, or as glycogen is formed, the phosphate level returns to normal. Extracellular potassium decreases as fluid of intracellular composition accompanies the deposition of glycogen in liver and muscles, or it decreases as new protein is formed through animation and utilization

of carbohydrate residues. Proper hydration is necessary if the utilization of glucose is to proceed normally.

With the foregoing as a background, it is now pertinent to review the present knowledge of the role played by insulin in the various processes. First, insulin produced in the beta cells of the islets of Langerhans facilitates transformation of glucose to glycogen. That this action takes place at the level of the hexokinase reaction is generally accepted, but how the action occurs is still in doubt. The most promising theories are that the insulin acts directly on hexokinase, that it inhibits the anterior pituitary and adrenals which normally inhibit hexokinase, or that it acts on the cell surface and permits a more rapid absorption of glucose and other hexoses across the cell membrane so that phosphorylation can occur. Second, insulin enhances the ability of tissues to oxidize glucose to CO_2 and H_2O (i.e., it accelerates utilization of glucose). Third, insulin greatly favors the transformation of glucose to fat. (Without insulin, the amount of glucose converted to fat is decreased by 10 per cent). Fourth, insulin furthers the synthesis of protein from amino acids. The question has re-

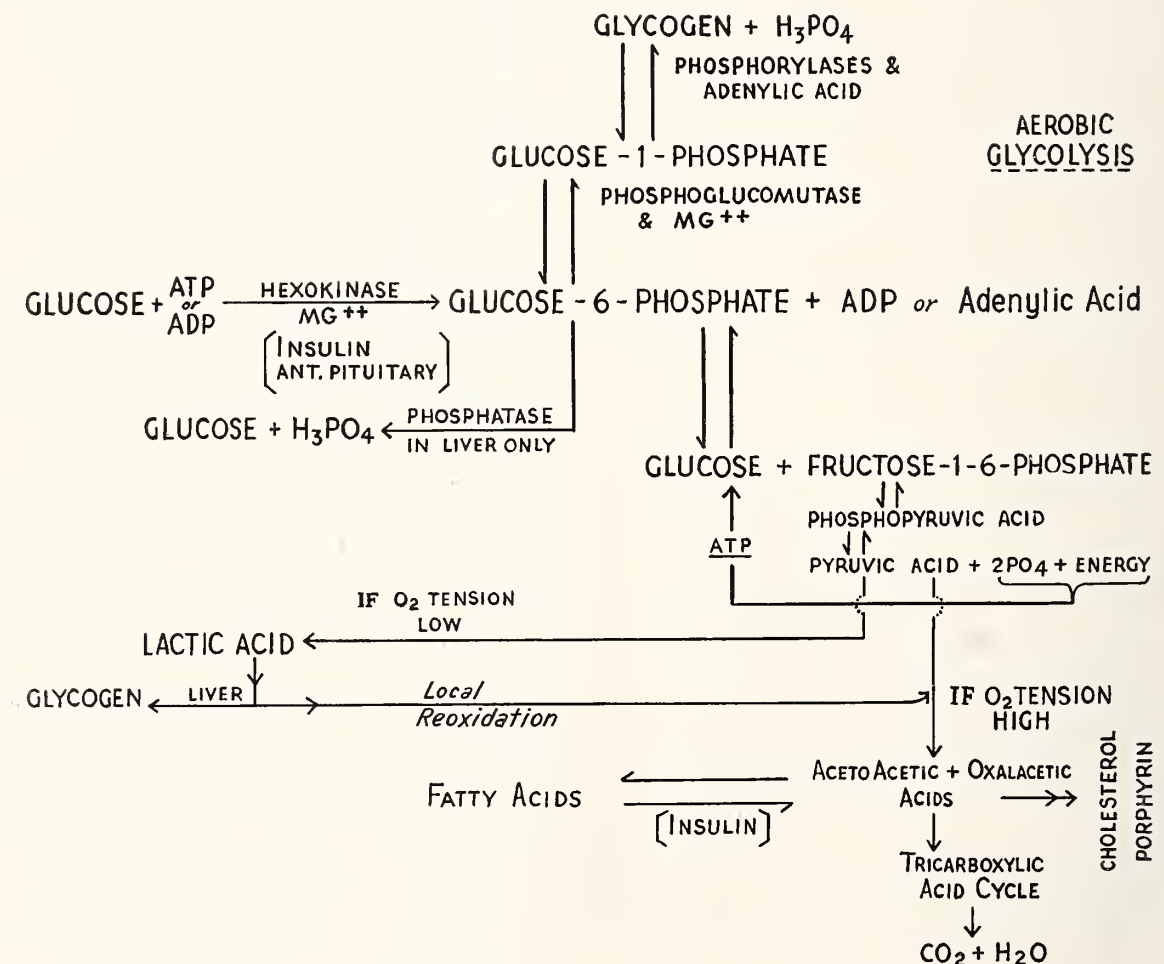


Fig. 1. The Krebs tricarboxylic acid cycle.

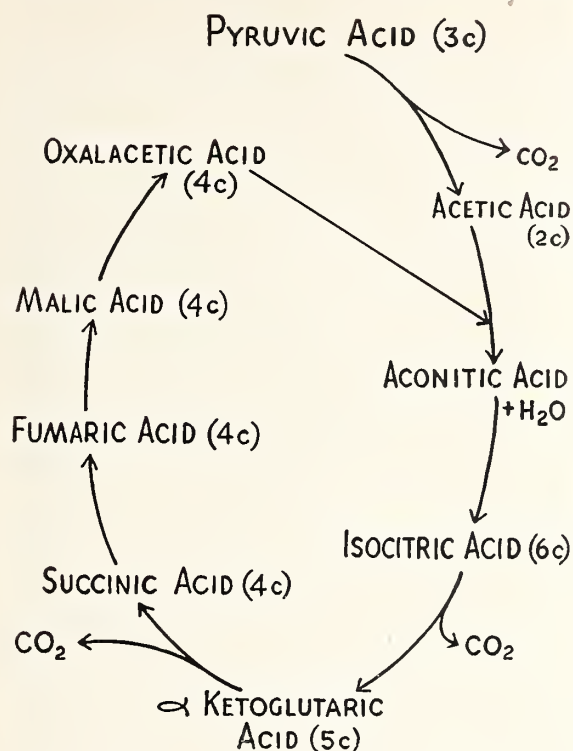


Fig. 2. Five pairs of hydrogen atoms are removed for the formation of one molecule of pyruvic acid and three molecules of CO_2 .

cently arisen as to whether insulin may act in the tricarboxylic acid cycle.

Insulin is destroyed by pepsin-HCl and chymotrypsin, and acidosis renders it less effective. Anesthetics interfere with its action, as does infection. Possibly, in these cases, adrenalin and acidosis or cortisone come into play as antagonists to the normal action of insulin. Somogyi has shown recently that the effect of insulin in producing hypoglycemia is limited, in that a defense mechanism involving the pituitary-adrenal axis is set up whenever the blood sugar gets below a certain critical level, usually about 60 mg. per cent.

Glukagon is a substance thought to be present as a contaminant in insulin. It may be the pancreatic hyperglycemic factor which causes the slight initial rise of blood sugar after insulin is given intravenously by liberating glucose from hepatic stores, and it acts to reduce slightly the anti-diabetogenic action of insulin. This factor may come from the alpha cells. Recently, investigators have thought that perhaps insulin may temporarily depress the beta cells.

The problem, sometimes found, of central-nervous-system damage in patients with prolonged or repeated insulin reactions has not yet been completely solved. Yannet, through experimentation with cats, could not decide whether it was insulin, or a combination of excess insulin and hypoglycemia, that caused the toxicity to brain cells sometimes encountered in insulin reactions.

The Cori cycle (Figure 3), was once thought to explain the regulation of blood sugar (blood glucose to muscle glycogen to blood lactic acid to liver glycogen, etc.) but, in the light of present knowledge, it is inadequate. Today we are beginning to understand some of the many interrelationships in a far more complex mechanism of blood-sugar control by the endocrine system. Although this picture is quite complex, some of the known factors are established.

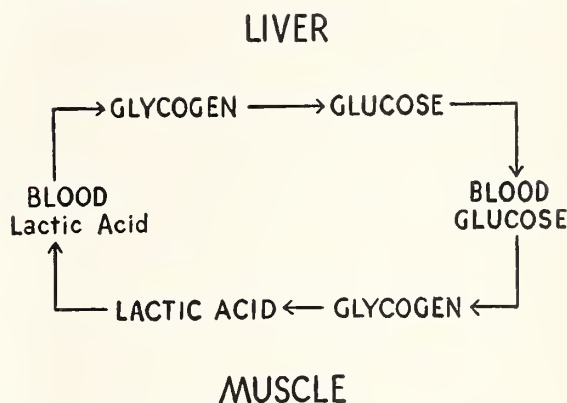


Fig. 3. The Cori cycle.

In 1927 Davidoff and Cushing reported that diabetes mellitus occurred in 12 per cent of 100 acromegalic patients. These figures were later added to and revised to 17 per cent. Thirty-six per cent of the acromegalics studied had glycosuria. Houssay showed conclusively that following removal of the pancreas from a previously hypophysectomized toad or dog, the resulting diabetes was mild as compared with that which pancreatectomy produces in a normal animal. These Houssay animals survive for longer periods than do those animals with an intact hypophysis and may have periods of hypoglycemia if fasted. The injection of anterior pituitary extracts causes a return of the usual diabetic state.

In addition, Houssay showed that injection of crude extracts of the anterior lobe of the pituitary gland into normal animals causes hyperglycemia and glucosuria. In 1937 it was shown that continuous injection of these extracts would cause a permanent diabetes. In 1951 Young showed that the diabetogenic principle of extracts from the anterior pituitary is associated with growth hormone (somatotropin), since these extracts would cause diabetes in adult dogs but not in puppies (rather, in the latter it would cause growth). Work with growth hormone was first reported in 1932 by Evans. There is at present a great deal of investigation being done on the subject of growth hormone, and general acceptance has now been granted the principle that growth hormone promotes nitrogen storage (protein synthesis?), promotes growth, depresses glucose uptake of isolated diaphragmatic muscle, stops severe loss of muscle

glycogen in a fasted hypophysectomized animal, makes alloxan diabetes worse, and can produce a permanent diabetes with pancreatic damage in a dog or cat. The mode of action thus is thought to be through inhibiting the peripheral utilization of carbohydrate and not through facilitating glycogenolysis. Raben, however, thinks that perhaps the diabetogenic factor is a contaminant of growth hormone, a concept not favored by others. It is thought also that the presence of the adrenal cortical hormone is necessary for the full effects of growth hormone on carbohydrate metabolism to occur.

Growth hormone, it is thought, may sometimes cause hypoglycemia by decreasing protein catabolism and thus decreasing the quantity of carbohydrate precursors. However if this happens and the hormone is still given, an elevation of blood sugar will yet follow. It has also been asked whether growth hormone may not have an effect on insulin secretion. This would account for the initial fall in blood sugar, and the later rise could be explained on the grounds that the pancreas was no longer able to secrete insulin. Inhibition of insulin *in vitro* has been shown by Brady, Luens and Gurin. The giving of insulin simultaneously with this diabetogenic factor will protect the islet cells against degeneration.

Adrenocorticotrophic hormone (ACTH) exerts an influence on carbohydrate metabolism, although a less intense one than that exerted by growth hormone. It is thought that ACTH, by accelerating the rate of protein catabolism, will make more intermediary metabolites (amino acids for deamination or by conversion of carbons) available for conversion to liver glycogen and thus glucose.

Both the adrenal medulla and cortex affect carbohydrate metabolism. According to present-day concepts, the epinephrine elaborated by the adrenal medulla represents an emergency reserve which can be thrown into the metabolic pool in response to stress situations of any kind. Its direct effects on the cardiovascular system and its enhancing of hepatic glycogenolysis make glucose available at the periphery; also epinephrine stimulates ACTH production or release from the anterior pituitary, so that production of adrenal cortical steroids is stimulated for a prolonged stress situation or for the recovery period following short but acute stress. It is possible that epinephrine may also dephosphorylize glucose, or decrease its peripheral or intracellular assimilation. This pituitary-adrenal axis thus represents one of the main systems for preserving homeostasis.

Nor-epinephrine, about 20 per cent of the secretion of the adrenal medulla, has no effect on carbohydrate metabolism. Epinephrine causes an immediate rise in blood sugar by inducing hepatic glycogenolysis. Later, muscle glycogen is mobilized and converted to lactic acid, which may be converted to liver glycogen and thus be available for trans-

formation to glucose. Cannon stated that the release of epinephrine is brought about when the blood sugar falls below 50, hypoglycemia irritating the brain-stem centers which control the discharge of epinephrine.

The adrenal cortical hormones exerting an influence on carbohydrate metabolism are those steroids oxygenated in the C11 position (S. Hormone). The adequate dosage of these hormones, or of ACTH, leads to an increase in blood sugar, an increase in liver glycogen, increased nitrogen excretion with increased gluconeogenesis from protein and increased protein catabolism, decreased carbohydrate utilization and decreased sensitivity to insulin. These conditions are reversible in the normal when administration of the hormone is stopped. In normal subjects, ACTH in daily doses of 75 to 150 mg. for 5 to 10 days may produce fasting hyperglycemia, glucosuria, decreased tolerance for carbohydrate, and insensitivity to insulin—all of which are completely reversed upon discontinuation of ACTH administration.

The influence of the thyroid on carbohydrate metabolism is undoubted. In 1935 it was shown that thyroid feeding increases the hyperglycemia which follows adrenalin injections, until liver glycogen becomes depleted. In 1927 Aszodi reported that following thyroidectomy, dogs became markedly sensitive to insulin. The incidence of hyperglycemia in patients with thyrotoxicosis is high. Housay administered thyroid extract to dogs that had been depancreatized to the extent that under ordinary conditions they had enough islet tissue to maintain a normal blood sugar and thus produced diabetes with lesions of the beta cells (metathyroid diabetes). The giving of thyroid hormone in excess causes an increase in cellular activity (oxygen uptake) of all body tissues, and unless adequate food is ingested, the carbohydrate, the protein and fat stores of the body become depleted. Hyperglycemia follows, especially if the pancreatic reserve already is low. Thyroid feeding in an animal with an intact pancreas will not produce diabetes. It is not assumed that the role of the thyroid in carbohydrate metabolism is as major as that of the anterior pituitary or adrenal cortex.

The influence of the gonads on carbohydrate metabolism has been the subject of considerable discussion. Although little agreement exists on this subject, it has been suggested that estrogens exert more of an effect than androgens. Estrogen is known to inhibit certain activities of the anterior pituitary. It has been reported that estrogens may benefit diabetes occurring in women at about the time of the menopause. In acromegaly it has been reported that a reversal of the abnormal glucose tolerance curve takes place, as well as a fall in serum phosphorus and a reduction in the size of the nose, hands and feet while estrogen is administered, all these effects being reversed when the estrogen was stopped. Others have postulated that estrogens exert a diabetogenic effect.

So far, we have discussed the hormonal control of glucose metabolism. Under neural control, there is also a regulatory mechanism made up of the two parts of the autonomic nervous system, the sympathetic and the parasympathetic. The sympathetic regulates the secretion of epinephrine and the parasympathetic controls the output of insulin. In 1855 Bernard punctured the floor of the 4th ventricle and noted a glycosuria he termed *piqûre diabétique*, thought now to be due to sympathetic involvement. There is known to be a center in the hypothalamus, the stimulation of which will be followed by hyperglycemia due to involvement of the adrenal medulla and liver. The parasympathetic centers are mainly located in the hypothalamus and involve the islet cells through the vagus nerve. Hyperglycemia presumably stimulates this center so that increased insulin is released from the pancreas. These neural influences may function as a means of control of blood sugar finer than that exerted by humoral mechanisms, although these latter are adequate for prevention of gross changes.

Figure 4 summarizes the regulatory mechanisms of carbohydrate metabolism. At this point should be mentioned those chemical agents known to produce diabetes. In 1943 it was shown that alloxan caused a selective necrosis of the islets of Langerhans. Alloxan is the ureide of meso-oxalic acid, and structurally is somewhat similar to uric acid. There may be an interaction also between alloxan and glutathione (the latter possibly exerting a protective physiological effect against alloxan). Also phloridzin, by decreasing the ability of the renal tubules to reabsorb glucose, can lead to glucosuria. Dehydroascorbic acid and dehydroiso-ascorbic acid are similar in structure to alloxan and have been shown to be capable of producing permanent hyperglycemia in rats.

Also tied in with a discussion of carbohydrate metabolism must be a discussion of ketosis and acidosis. When the utilization of carbohydrate for energy is impaired, the body stores of fat and of protein are subjected to unusual demands. In the catabolism of fat, ketone bodies are produced, and if their production is abnormally great (as in uncontrolled diabetes), they are poured into the blood so rapidly that the tissues cannot oxidize them. In consequence, the excess accumulates and is excreted in the urine. Ketosis exists when the level of blood ketones is above 3 mg. per cent, regardless of changes in the alkali reserve. These ketone bodies—which, as has been stated, originate from the beta oxidation in the liver of fatty acids (mainly but not entirely)—appear in the urine as betahydroxybutyric and acetoacetic (diacetic) acid, and acetone, diacetic acid being the more toxic. As these ketone bodies are excreted, they carry sodium and base out with them, and the alkali reserve of the blood (ability to combine with CO_2) falls; the total base (Na^+ and K^+) will be decreased (from 155 to 135-145 mEq. L.) and the pH will fall. Acidosis then exists. In this state also, a great elevation of blood fat will be observed, as well as an elevation of cholesterol, elevation of lipoproteins, and a peaking of the beta and gamma globulins. Dehydration will also result. The basal metabolic rate will increase (not alone due to the hyperpnea which is present). A central shock is present, with decreased peripheral resistance, increased cardiac output, and hypotension. Urinary corticoid excretion is increased, and insulin is less effective. There may be a decreased rate of oxygen utilization by the brain. The exact mechanism of coma in acidosis is not known, but if CO_2 vol. per cent is +30, there is usually no coma, and if it is less than 15, coma usually occurs. If the total blood

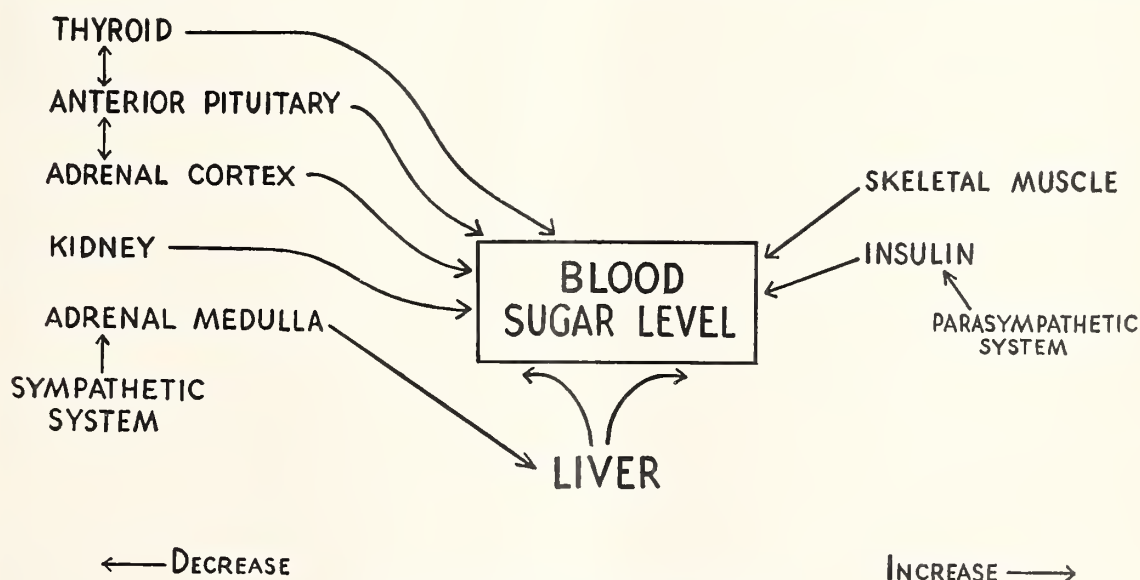


Fig. 4. Factors in control of blood-sugar level.

ketone level is +60 mg. per cent, the patient usually is drowsy, and if it is +100 mg. per cent he usually is unconscious (but there have been cases in which, when the level was 18, the subject was comatose, and when the level of blood ketones was 123 mg. per cent, the subject was alert).

At this point, we shall review a few of the more recent developments as regards the relationship of electrolytes to carbohydrate metabolism, especially in diabetic acidosis.

The balance experiments of Peters in the recovery phase of diabetic acidosis show deficits of salt as great as 35 to 40 grams. He feels that this amount of saline should be given to all diabetics in severe acidosis as long as their kidney and cardiac status is adequate. Although sodium losses in acidosis do not often reach the levels of producing vascular collapse, appreciable losses of sodium do occur in all cases of severe acidosis. Martin and Wertman found sodium levels below normal in 14 patients with acidosis, in spite of marked hemoconcentration. Danowski found that although serum sodium concentration may be normal in acidosis, the sodium concentration in red blood cells is low and in some instances may be entirely wiped out of these cells.

The alterations that occur in body potassium during diabetic acidosis were first reported by Holler in 1946, who found a serum potassium of 2.5 mEq. L. in an 18-year-old girl with acidosis. He attributed this hypokalemia to an unusually profuse diuresis during the first 24 hours of therapy, as well as a prolonged precoma period of poor diabetic control, with increased losses of potassium in the urine prior to treatment. It has since been shown that the serum potassium usually reaches its lowest point during the first 10-24 hours of therapy, even though at the onset of therapy the level may have been normal. This decrease during the course of treatment is attributable to (a) the shift of potassium into the cells with phosphate and glucose to form potassium hexophosphate under the influence of insulin; (b) continued excretion of potassium in urine; (c) decreased food intake (early) and (d) the expansion of extracellular volume with intravenous fluids during the course of treatment. Kinsell has suggested that potassium depletion may be a factor in the production by ACTH and/or cortisone of diabetogenic effects and insulin resistance.

Guest, in 1942, discovered that at the height of diabetic acidosis the phosphorous content of blood cells is reduced, although serum concentrations may be normal or high. The fall of serum phosphorus reaches a peak at about 4 to 12 hours after therapy is instituted.

According to Martin and Wertman, serum calcium levels may show slight drops during therapy of diabetic acidosis.

Again according to Martin and Wertman, serum magnesium levels show a marked drop during the first 24 hours of therapy of diabetic acidosis, even though the level is normal or elevated at the insti-

tution of therapy. They found a fairly good correlation to exist between the presence of coma on entry to the hospital and the serum magnesium level on entry. Those who had a high serum magnesium level (over 2.5 mEq. L.) tended to be comatose, but those with levels under 2.5 mEq. L. tended to be conscious.

Thus, in summary, one might say that before or during the treatment of diabetic acidosis most of the important body electrolytes are reduced, at times to a marked degree, and they may require replacement.

Mention has not yet been made of another important factor in carbohydrate metabolism, namely vitamins. Many vitamins might enter the discussion at this point, but probably at this state of our knowledge the discussion can safely be limited to Thiamine. Thiamine is known to be essential in the metabolic interplay among glycogen, lactic acid and pyruvic acid. It is believed that Thiamine acts as a co-enzyme with pyruvate oxidase in the oxidation of pyruvic acid. We know that Thiamine is quite closely related to cocarboxylase. It has been shown that Thiamine has an acellular co-enzyme action, especially in the metabolism of the alpha-keto acids. In deficiencies, carbohydrate metabolism is incomplete, and pyruvic acid accumulates in the tissues. Since the Thiamine requirement varies directly with carbohydrate intake, an excessive ingestion of carbohydrate with a low or borderline Thiamine intake may initiate or aggravate signs and symptoms of Thiamine deficiency.

I have not mentioned many factors which are undoubtedly quite important in glucose metabolism but about which not too much is yet known. For instance, in liver disease there often occurs a change in carbohydrate metabolism. What is there that at times causes the liver to show increased or decreased glycogenolysis, other than the factors discussed? How important is the diet in regulating carbohydrate metabolism? Does hypoinsulinism tend to produce obesity? Would additional amino acids in the diet provide more insulin-making material for the body? How does Vitamin C lower glucose tolerance? How important is Vitamin C to the adrenal cortex? Are there adrenogenic, anti-adrenogenic, pituitary and anti-pituitary foods, as there are goiterogenic and anti-goiterogenic? With the answering of these and many other questions not considered here, our insight into the mechanisms of carbohydrate metabolism will be greatly increased.

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Conjunctivitis

Its Etiologic Diagnosis and Treatment

H. B. OSTLER, M.D.*

AND

A. E. BRALEY, M.D.*

IOWA CITY

DETERMINING THE ETIOLOGY of a disease prior to treatment is probably more important today than before the era of antibiotics, for now one drug may be highly effective while a second drug may be contraindicated in a specific disease.

It is advisable to take cultures and to use other laboratory methods when necessary to determine the etiology of a conjunctivitis in cases where there is corneal ulceration or severe edema of the lids, in cases of chronic conjunctivitis and in cases not responding to therapy within 48 hours.

With the bother and expense involved in sending a patient to a laboratory, or with the added time involved in attempting to take cultures and examine smears oneself, a busy physician cannot be expected to call on the laboratory for diagnosis in even most cases of conjunctivitis or blepharitis.

The purpose of this paper, therefore, is twofold: first, to indicate the most effective therapy for those diseases commonly involving the lids and conjunctiva, and second, to reiterate some of the clinical findings that will aid in the making of an etiologic diagnosis.

GENERAL

Ointments. Water-soluble ointments containing antibiotics are most useful in the treatment of

blepharitis, or conjunctivitis associated with blepharitis, for the ointment helps to keep the antibiotic in contact with the lid margin for a long period of time. When indicated for treatment of diseases involving the anterior segment of the eye, Woods¹² thinks that cortisone or hydrocortisone are more useful in ointment form than in solution, for he feels that the effects are more predictable, and that one need not give the ointment so frequently.

The ointment is administered by placing a small amount in the inferior fornix or along the lid margin three to four times a day, and is continued until the area has appeared normal for two days.

Solutions. For the treatment of conjunctivitis, keratitis, and corneal ulceration, local antibiotics, when indicated, are most useful in solution. The patient is told to instill two drops in the conjunctival sac every thirty minutes during the day for the first day, then four to six times a day until the eye has appeared normal for two days. If treatment is stopped earlier, recurrences are frequent.

SYSTEMIC THERAPY

Systemic antibiotics are occasionally indicated. We shall, therefore, attempt to indicate when systemic treatment is advisable.

Penicillin. Because penicillin is a high sensitizer, it should only be used systemically. As may

*From the Department of Ophthalmology, State University of Iowa.

be noted from Table I, the bacterial spectrum includes the spirochetes, and the gram-positive organisms, as well as the viruses of inclusion body conjunctivitis, and lymphogranuloma venereum. It is the treatment of choice in syphilis, in gonorrhea, in *Clostridium* infections when combined with the antitoxin, in diphtheria when combined with the antitoxin, and in actinomycosis when combined with the sulfonamides.

Bacitracin. In Table I it may be noted that bacitracin and penicillin have similar bacterial spectra. Bacitracin is a low sensitizer and should only be used locally. Thus it is recommended for local therapy where feasible.

(Bacitracin, neomycin, and polymyxin have a nephrotoxic effect when given systemically, and, therefore, are recommended for local therapy to avoid any chance that a sensitization may result from administration of one of the systemic antibiotics.)

Sulfonamides. In general, the sulfonamides are less effective than penicillin against gram-positive organisms, especially the gram-positive rods, and are not effective against spirochetes. They are somewhat effective against many of the gram-negative rods, and against the larger viruses causing trachoma, psittacosis, and lymphogranuloma venereum, but are contraindicated in the treatment of rickettsial diseases. Sulfonamides systemically, combined with local aureomycin or terramycin solution, are the treatment of choice in trachoma.

Streptomycin or dihydrostreptomycin are effective against many gram-negative organisms, as may be seen in Table I. Either, in combination with Aureomycin when given systemically, is the treatment of choice for brucellosis, and when combined with para aminosalicylic acid and isoniazide is effective against the tubercle bacillus. Because bacterial resistance to streptomycin or dihydrostreptomycin tends to develop rapidly and because sensitivity to them may occur, it is best to use them only for the treatment of tuberculosis or brucellosis, or when an organism is found to be sensitive to them only.

Aureomycin, Terramycin, and Chloramphenicol (Chloromycetin). The broad spectrum antibiotics Aureomycin, Terramycin (oxytetracycline), and Chloramphenicol are classified together because of their similarity in action. They are called broad-spectrum antibiotics because of their effectiveness against the gram-negative rods, the larger viruses, and the rickettsiae, as well as those organisms against which penicillin is effective. The three are similar in their bacterial spectra, but one is occasionally more effective against a specific organism or a specific strain of an organism. Chloromycetin is outstanding, as compared to the others, because of its greater penetration into the eye following systemic use, according to studies conducted by Leopold, et al.³¹ One should also remember that Chloromycetin systemically has been reported on rare occasions to cause aplastic anemia.³⁷ Chloromycetin systemically re-

mains the drug of choice in the treatment of typhoid fever, however.

Polymyxin B (Aerosporin). As noted previously, polymyxin systemically has a nephrotoxic effect. Polymyxin locally (and possibly combined with a broad-spectrum antibiotic systemically) is the treatment of choice in *Pseudomonas* infections of the eye. *Pseudomonas aeruginosa* is often considered to be a saprophyte, but in the eye a *pseudomonas* infection is usually very severe. *Pseudomonas* can penetrate into the eye with even a slight erosion of the corneal epithelium, and within 24 hours can cause a severe central corneal ulcer followed by an endophthalmitis, or a panophthalmitis unless properly treated. Because *Pseudomonas* may be present in the solutions used in one's office, especially in florescene, the physician himself may introduce the organism into the patient's eye. Because of such a possibility, it is wise to instill polymyxin solution or ointment into the eye of any patient seen with a corneal defect.

Neomycin, as noted previously, when given systemically has a nephrotoxic effect. Neomycin has not been included in the Table, but has a bacterial spectrum very similar to streptomycin's in that it is effective against many gram-negative organisms, the tubercle bacillus and several of the spirochetes, but is only weakly effective against gram-positive organisms.

Erythromycin, a comparatively new antibiotic, has a bacterial spectrum similar to that of penicillin, being most effective against the gram-positive organisms and gram-negative cocci, but only questionably effective against the larger viruses.

Acromycin and Tetracine are fairly new antibiotics and appear to be of the broad-spectrum type similar in activity to Aureomycin, Terramycin, and chloramphenicol.




























































































































































































































Synergism versus Antagonism. Various bacterial strains show large variation in response to antibiotics, especially to combinations of antibiotics. Antagonism most commonly occurs between penicillin or streptomycin and the broad-spectrum antibiotics. When such cases occur, the penicillin or streptomycin has no effect, and the broad-spectrum antibiotics act as though they were given alone.

Synergism, in which two antibiotics given together have a greater effect than the sum total of both of them would have, frequently can be demonstrated between penicillin and streptomycin, or between various combinations of the broad-spectrum antibiotics.

Yet, since antagonism and synergism vary from strain to strain, one cannot predict the effects of combinations of antibiotics without doing sensitivity studies.

Cortisone, hydrocortisone and ACTH, by altering the inflammatory responses of the body, cause a decreased amount of scarring and vascularization. There are therefore many indications and contraindications to their use in the treatment

TABLE I.

ORGANISMS							REMARKS
	PENICILLIN (Use only systemically)	BACITRACIN	SULFONAMIDES	BROAD SPECTRUM ANTIBIOTICS Aureomycin, Terramycin, Chloromycetin	STREPTOMYCIN and DIHYDROSTREPTOMYCIN (Use only systemically)	POLYMYXIN B	
Indicates may be useful 							
Effective in treatment 							
Drug of choice 							
SPIROCHETES causing:							
A. Syphilis -----							Treat systemically
B. Weil's Disease (Leptospirosis) -----							Treat systemically
C. Rat Bite Fever -----							Treat systemically
D. Relapsing Fever -----							Treat systemically
E. Yaws -----							Treat systemically
GRAM POSITIVE ORGANISMS							
A. Cocci							
1. Streptococci							
a. Alpha hemolytic -----							20% resistant to penicillin
b. Beta hemolytic -----							
c. Non hemolytic -----							
2. Diplococcus pneumoniae -----							
3. Staphylococci -----							Many strains resistant to penicillin
B. Rods							
1. Clostridium Group -----							Treat systemically. Use with specific antitoxin.
2. Corynebacterium diphtheriae -----							Treat systemically. Use with specific antitoxin.
3. Bacillus anthracis -----							Treat systemically. Use with specific antitoxin.
GRAM NEGATIVE ORGANISMS							
A. Cocci							
1. Gonococci -----							Treat systemically
2. Meningococci -----							Use combinations of antibiotics
B. Rods							
1. Aerobacter aerogenes -----							
2. Escherichia coli -----							
3. Klebsiella pneumoniae -----							
4. Proteus vulgaris -----							
5. Pseudomonas aeruginosa -----							
6. Eberthella (Salmonella) typhosa -----							Chloromycetin drug of choice
7. Shigella -----							
8. Pasturella tularensis -----							Use the two combined
9. Brucella group -----							Use streptomycin and the broad spectrum antibiotics combined
10. Hemophilus Influenzae -----							Use combinations
11. Hemophilus duplex (Morax-Axenfeld) -----							
12. Hemophilus ducrey -----							
13. Hemophilus pertussis -----							
ACID FAST ORGANISMS							
A. Mycobacterium tuberculosis -----							Use combined with Para Amino Salacylic Acid and Isoniazide
FUNGI							
A. Actinomycosis -----							Use the two combined
B. Leptothrix -----							Use penicillin and sulfonamides systemically combined
LARGE VIRUSES							
A. Psittacosis -----							
B. Trachoma -----							Use the sulfonamides systemically and broad spectrum antibiotics locally
C. Lymphogranuloma venereum -----							
D. Inclusion blenorrhea -----							
E. Primary atypical pneumonia -----							
RICKETTSIAE							
							Sulfonamides contraindicated

of disease of the eye. In bacterial and viral infections, therefore, such drugs are contraindicated because the resistance of the tissue to bacteria and to viruses is reduced as a result of the decreased inflammatory response. A distinction must be made however between an active infection and a hypersensitivity reaction of the eye to bacterial proteins. The organism, if present in the body in hypersensitivity reactions, is usually present in a remote part of the body, and, therefore, the local use of these drugs does not affect the immune responses to the organism in that remote area.

TABLE II
CORTISONE OR HYDROCORTISONE

Effective in (Types of Conjunctivitis):	
Allergic Blepharoconjunctivitis	
Vernal Conjunctivitis	
Allergic Conjunctivitis	
Acne Rosacea Keratoconjunctivitis	
Chronic Keratoconjunctivitis (allergic)	
Drug sensitivities and Contact Dermatitis such as occurs to atropine	
No effect in (Types of Conjunctivitis):	
Ocular pemphigus	
Erythema multiforme	
Stevens Johnson Disease	
Contraindicated in:	
Bacterial, rickettsial, viral, and fungus infections actively involving the eye	

ACTH locally has no effect, whereas cortisone or hydrocortisone, when indicated, and when given either in ointment or solution form, appears to be satisfactory for affections involving the anterior segment of the eye. Thus one does not have to resort to systemic therapy. Hydrocortisone is about twice as potent gram for gram as cortisone, even when given locally. The solution or ointment should be given about every four hours.

BLEPHARITIS

The symptoms of blepharitis are fullness of the eyelids, itching and burning of the eyelids, and a mild discharge noted especially upon awakening. The inflammation may be very mild and therefore easily overlooked. Blepharitis often causes or is associated with a chronic catarrhal conjunctivitis which is characterized by repeated exacerbations of symptoms of burning and smarting, and scanty secretions. The etiology and the treatment of blepharitis and the associated conjunctivitis are most often the same.

Approximately one third of the cases of blepharitis are caused by Staphylococci and about one-third from seborrheic involvement. The remaining cases result from "mixed" infections of Staphylococci and seborrhea, except for an occasional case caused by the diplobacillus of Morax and Axenfeld.

Blepharitis may be divided into the ulcerosa, the squamosa and the angular types.

Blepharitis ulcerosa is characterized by dry, hard, sticky, yellow crusts, and tiny ulcers

are seen at the bases of the eyelashes following removal of the crusts. The tiny ulcers are pathognomonic of a Staphylococcal infection, especially when associated with a conjunctivitis and with marginal corneal ulcers or infiltrates.

Use of antibiotics in chronic cases of blepharitis frequently results in apparent cure, but the infection often recurs after therapy is discontinued. In chronic cases the most satisfactory treatment, therefore, seems to be the use of a Staphylococcal vaccine or toxoid. A stock Staphylococcal toxoid is perfectly satisfactory. After testing for sensitivity, the toxoid is given intradermally in very small amounts (0.01 cc.) initially, and the amount is gradually increased twice weekly until one reaches a total of 1.0 cc., which then may have to be continued for a period of one to two years at weekly or bi-monthly intervals. One must proceed with caution in using Staphylococcal toxoid, for systemic reactions may be severe.

Blepharitis squamosa is due most often to seborrhea, and is frequently associated with a severe seborrheic involvement of the scalp. One should, therefore, examine the scalp if he suspects seborrhea. Blepharitis squamosa is characterized by yellow, oily, greasy crusts, and hyperemia of the lid margin. Treatment is directed toward the seborrheic involvement of the scalp by the use of Selsun, salicylic acid or the other old standbys, which when used periodically often control the blepharitis. If necessary, one may also paint a line at the lid margin with two per cent brilliant green in 70 per cent alcohol.

Mixed involvement of the lids by Staphylococci and seborrhea may also produce blepharitis squamosa. In these cases, a combination of the treatments for seborrhea and Staphylococci seems to be the most satisfactory.

Angular blepharitis most frequently is caused by the diplobacillus of Morax and Axenfeld, but occasionally is caused by the Staphylococci. It is characterized by maceration of the lids at the angles, with relative sparing of the other parts of the lids. The conjunctiva may also be involved at the angles. Treatment of choice is the use of broad-spectrum antibiotics.

CONJUNCTIVITIS

Symptoms resulting from conjunctivitis are epiphora, a sense of fullness around the eyes and an agglutination of the lids, especially upon awakening.

Increased Secretion of Tears. Conjunctival inflammation, with an increased secretion of tears, suggests either a bacterial etiology, in which the secretions are flaky and amorphous in type, or an allergic etiology, in which the secretions are stringy. The stringy secretions occur especially in vernal catarrh and are due to a high fibrinous content.

Scanty Secretion of Tears. Conjunctival inflammation associated with a scanty secretion of tears suggests either a granulomatous conjunctivitis, a viral conjunctivitis, or a keratoconjunctivitis sicca.

Keratoconjunctivitis sicca arises from decreased secretion of tears, and is characterized by conjunctival hyperemia (especially bulbar), and irritation symptoms out of proportion to the signs of inflammation. It frequently begins as a chronic catarrhal conjunctivitis. The cornea often has punctate epithelial lesions more prominent in the lower half of the cornea, or even actual filament formation. The local treatment of keratoconjunctivitis sicca, which is often helpful, is directed toward the artificial replacing of tears or the conserving of tears by closing the puncta. The latter is more satisfactory and may be done by curetting the cocaineized punctum to destroy the epithelium and then applying a hot needle of a hyfrecator to the punctum for an instant.

Color of the Conjunctiva. A brilliant red color is characteristic of bacterial infections of the conjunctiva, whereas a milky appearance is characteristic of allergic conjunctivitis, especially vernal catarrh. Small subconjunctival hemorrhages immediately suggest the pneumococcus or the rarer Koch-Weeks bacillus, but on rare occasions they may occur in other conjunctivitis.

Hyperemia without cellular infiltration is caused by irritation from physical causes such as wind, sun, smoke, muscular imbalance, errors of refraction, etc., as well as from inflammatory conditions of the nose and very mild infections of the conjunctiva. It is occasionally seen in general vascular dilatation, such as in acne rosacea. Acne rosacea may respond to cortisone or hydrocortisone locally, but often such treatment is unsatisfactory.

Chemosis of the bulbar conjunctiva suggests an acute gonococcal conjunctivitis or epidemic keratoconjunctivitis and may occur before there is any gross cellular infiltration or exudation. It is rare in other acute conjunctival infections and does not occur in chronic conjunctivitis.

Chemosis may be a prominent sign in epidemic keratoconjunctivitis, and is often associated with edema of the lids, caruncle, and semilunar fold. Chemosis without acute inflammation may occur as an initial sign in trichinosis.

Itching. A complaint of itching of the eyes if offered spontaneously is pathognomonic of allergy, and frequently is the chief complaint in vernal catarrh.

Pain. Pain, associated with conjunctivitis usually arises from corneal involvement. Pain most severe upon awakening and improving during the day suggests a Staphylococcal blepharitis in which the Staphylococcus toxin causes corneal defects that heal as the tears wash away the toxin during the waking period. Pain present in the afternoon and absent or slight in the morning suggests kerato-

conjunctivitis sicca. The pain during the day arises from corneal defects, caused by drying of the cornea. They tend to heal when the lids are closed.

Keratinization of the conjunctiva may occur in advanced vitamin A deficiency, in keratoconjunctivitis sicca and in chronic blastomycosis.

Bitot's spot characteristically is a small triangular mass that is grey, dry, and opaque in appearance. It occurs most commonly at the temporal limbus, is frequently bilateral, and occurs in lesser degrees of vitamin A deficiency. The cornea in vitamin A deficiency may also be somewhat opaque. In treatment one uses large doses of vitamin A.

Conjunctivitis in the newborn, when secondary to congenital stenosis of the nasolacrimal duct, occurs typically during the third to the fourth week of life following the establishment of lachrymation, and is usually unilateral. Epiphora always precedes the dacryocystitis. The most common etiology is the pneumococci and the influenzal bacillus. Treatment consists of establishing tear drainage by irrigation of the sac or probing of the nasolacrimal duct.

Conjunctivitis arising from primary involvement of the conjunctiva in the newborn begins typically on the second to the third day of life. Several decades ago the most frequent cause of conjunctivitis in the newborn was the gonococcus, but now it is fortunately very rare. Gonorrhea ophthalmia is typically associated with a marked purulent discharge, and the swelling of the lids is frequently so severe that the upper lid overrides the lower one. Such a finding is almost pathognomonic of gonorrhea ophthalmia. There is a marked papillary hypertrophy which causes all of the conjunctiva to be thrown into ridges. A central corneal ulcer develops rapidly and is followed by perforation if the disease is not treated adequately. The treatment of choice is local and systemic penicillin. Local antibiotics may be of value,³⁶ even though the infection is located deep in the conjunctiva, and the discharge tends to wash away the antibiotic.

Other conjunctivitis in the newborn are usually catarrhal in type, and, if associated with a marked amount of catarrhal discharge, are caused most often by the Staphylococcus. There is only a mild cellular infiltration, the cornea does not tend to become involved, and lid involvement is rare.

Early conjunctivitis is the commonest cause of mild neonatal sepsis.³²

If there is only a mild amount of discharge present, the conjunctivitis may be due to silver nitrate instillation, or in rare cases may be due to inclusion blenorrhea.

Inclusion blenorrhea is a viral disease. It begins as an acute or hyperacute conjunctivitis in the newborn, but gradually becomes chronic and tends to persist for from three months to one year. At

first the conjunctivitis is papillary in type, but after three to four months it becomes follicular. The upper tarsus is frequently spared. Inclusion blenorrhea in the newborn is the same as swimming-pool conjunctivitis or inclusion blenorrhea in the adult, yet in the adult the conjunctivitis is follicular from the start. Treatment consists of sulfonamides locally in the infant, or sulfonamides systemically in the adult. The broad-spectrum antibiotics are also of value.

In the newborn the pneumococcus may also cause a conjunctivitis associated with moderate catarrhal secretion. Its clinical diagnosis may be made by finding subconjunctival hemorrhages, since the next most frequent cause is the Koch-Weeks bacillus, a micro-organism which involves the conjunctiva of the newborn only rarely.

Conjunctivitis from other causes is rare in the newborn and is due to the influenza bacillus or the beta hemolytic Streptococcus.

Acute Conjunctivitis in the Child and Adult. Purulent conjunctivitis in the child or in the adult is rare. The important causes are the gonococcus and the meningococcus.

Meningococcal involvement of the eye may be associated with meningococcal meningitis or meningococcemia. Meningococcal conjunctivitis is usually milder than gonorrheal ophthalmia and is less likely to cause complications. The treatment is the use of systemic penicillin and sulfonamides.

Catarrhal conjunctivitis is milder than the purulent type, there is a higher proportion of mucus to pus in the secretions, and there are less severe sequelae. Acute catarrhal conjunctivitis is often epidemic, especially in children. It is characterized by an intense hyperemia, especially bulbar, and tends to spare the upper tarsal conjunctiva.

The pneumococcus is the commonest cause of acute catarrhal conjunctivitis, and typically causes numerous subconjunctival hemorrhages. The cornea and eyelids are not involved.

The Koch-Weeks bacillus is the next most frequent cause of acute catarrhal conjunctivitis, but is rare in Iowa. It is the only other common bacteria producing subconjunctival hemorrhages in acute conjunctivitis.

Rare causes of acute catarrhal conjunctivitis are the Streptococcus viridans and the Staphylococcus. Streptococcal infections typically do not involve the cornea or the eyelid. The Staphylococcus, on the other hand, frequently involves the eyelids and produces a chronic conjunctivitis. It occasionally involves the cornea, resulting in a marginal ulcer or a marginal infiltrate which, if associated with a superficial punctate keratitis (superficial staining of the cornea in minute areas), is diagnostic of staphylococcal conjunctivitis.

Subacute catarrhal conjunctivitis is less rapid in onset, is less severe, and frequently lasts longer than acute catarrhal conjunctivitis. The commonest cause is the Hemophilus influenzae

organism, which does not produce bulbar subconjunctival hemorrhages.

Rare causes of subacute catarrhal conjunctivitis are Escherichia coli, and Proteus vulgaris, both of which cause less inflammation than the H. influenzae organism. Very rarely, syphilis early in the second stage may cause a subacute catarrhal conjunctivitis.

Conjunctivitis Secondary to Lacrimal Duct Involvement. A conjunctivitis arising secondary to chronic dacryocystitis is most frequently caused by the pneumococcus, the picture being that of a subacute catarrhal conjunctivitis. Treatment of such cases is primarily directed toward the dacryocystitis.

A violently acute conjunctivitis secondary to chronic dacryocystitis may also be caused by the hemolytic Streptococcus. The conjunctivitis may be so severe that the dacryocystitis is overlooked.

Streptothrix involvement of the canaliculi may cause a mild or subacute conjunctivitis associated with a large amount of mucopurulent secretion. The conjunctivitis is unilateral, and one or both lacrimal puncta are red, edematous, and dilated. Swelling may also be evident in the area of the inner canthus. If concretions are obtained by milking the lacrimal sac, one may be fairly certain of the diagnosis of Streptothrix. The treatment consists of currying out the concretions present in the canaliculi after injecting the area with procaine.

Chronic catarrhal conjunctivitis is most frequently caused by or associated with blepharitis, as noted previously. The etiology of the two are the same.

A chronic catarrhal conjunctivitis may arise from the pearly white umbilicated nodule of molluscum contagiosum or from a common wart that is located on the lid margin. The conjunctivitis is usually follicular. Diagnosis of the lesion can frequently be made clinically from appearance, but if the lesion is macerated, one may have to resort to biopsy, or in the case of the molluscum contagiosum nodule, one may express material from the center of the nodule and examine it for the characteristic acidophilic or basophilic cytoplasmic inclusion bodies which typically push the atrophic nucleus to one side. Satisfactory treatment in both cases consists of the removal of the tumor.

True and pseudo-membrane formation usually involves the palpebral conjunctiva. Removal of a true membrane leaves a rough and bleeding surface, but a pseudomembrane may be removed without causing bleeding. True membranes occur only rarely and have the same etiology as thick pseudomembranes.

The thick pseudomembrane is most frequently caused by the beta hemolytic Streptococci, which may either be located deep in the tissues and arising from a focus elsewhere in the body, or may be

present in the conjunctival sac. The treatment of choice is systemic penicillin.

Diphtheria is rare in the United States, but should always be considered as a cause of a true membrane or a thick pseudomembrane. Diphtheritic involvement of the conjunctiva is usually unassociated with nasal or pharyngeal involvement, but the finding of a membrane in the nose or throat should suggest the possibility of diphtheritic or streptococcal involvement.

Rarer causes of pseudomembranes are the *Streptothrix* and erythema multiforme.

Erythema multiforme may cause a purulent or mild catarrhal conjunctivitis, but most commonly causes a pseudomembrane covering the bulbar and/or palpebral conjunctiva. Corneal involvement is almost invariable, and ulceration and perforation are common. Associated signs and symptoms of fever, stomatitis, rhinitis, eruption on the hands and feet, and leukopenia should suggest erythema multiforme. Treatment with systemic ACTH or cortisone is of only questionable value. Symptomatic treatment and eradication of any possible causative factors are indicated.

Ocular pemphigus is an even rarer cause of a thick pseudomembrane. Typically it is chronic and involves the mucous membranes of the nasal and oral cavity, causing stomatitis, but does not involve the skin. Treatment is similar to that outlined for erythema multiforme.

Secondary syphilis involving the conjunctiva usually produces mucous patches that are moist, elevated, whitish and surrounded by a narrow border of erythema. Infrequently, it may produce a thick pseudomembrane.

A thick pseudomembrane is occasionally seen in an epidemic keratoconjunctivitis which is followed by fine conjunctival scarring. Diagnosis can be substantiated clinically only after corneal involvement has occurred.

Monilia albicans may cause soft white patches on the conjunctiva which can be confused with a pseudomembrane. It occurs only secondary to *Monilia* infection elsewhere. Treatment is directed toward the systemic infection by the use of Lugol's solution by mouth, a low carbohydrate diet, and high doses of vitamin B complex.

Dermatitis herpetiformis and epidermolysis bullosa may also be associated with a thick pseudomembrane.

Fine Transient Pseudomembranes. A very fine transparent and transient pseudomembrane is often seen in the active stage of the palpebral type of vernal conjunctivitis, but is not seen in the limbal variety of vernal catarrh.

A less transparent transient pseudomembrane may occur in hyperacute and acute bacterial conjunctivitis, in inclusion body conjunctivitis, in epidemic keratoconjunctivitis, and in herpes simplex. In epidemic keratoconjunctivitis it occurs more often than does the thick pseudomembrane.

In herpes simplex, corneal involvement occurs early and helps to give the diagnosis. Treatment of herpes simplex is often very discouraging. Cortisone locally is contraindicated in the active stage of the disease, for several cases have been reported recently in which perforation of the cornea has occurred.²⁴ Vaccination with cow-pox vaccine may be of value and can be repeated if the herpes continues to recur. Local or systemic treatment with iodine, and local heat, by means of the theraphore, may also be used.

Phlyctenules. Conjunctival phlyctenules are diagnostic of phlyctenular conjunctivitis. They are small red elevations which occur commonly near the limbus, but only rarely on the palpebral conjunctiva. There is no congestion between the phlyctenules, and they have a tendency to rupture, producing little ulcers which heal in about ten days.

Inflammation of a pinguecula may simulate a phlyctenule, but is differentiated because the surrounding area is inflamed. Phlyctenular conjunctivitis is most often seen in malnourished children and is probably a hypersensitivity reaction to tuberculo-protein. It is often seen in systemic tuberculous infection. Local cortisone is the treatment of choice for the phlyctenular conjunctivitis.

Coccidioides immitis has also caused phlyctenular conjunctivitis in young children. The diagnosis is made by obtaining a positive skin test to *Coccidioides* and a negative tuberculin test. The conjunctivitis can be treated with local cortisone, and the *Coccidioides* with systemic iodides.

Papillary Hypertrophy. Papillae often occur in any inflammation in which there is cellular infiltration. In the center, a papilla characteristically has a capillary tuft which gives a reddish appearance to the nodule and is seen readily by slitlamp. A follicle, on the other hand, has an avascular center with capillary tufts present around the edges.

Microscopic papillary hypertrophy gives a velvety appearance to the conjunctiva and suggests a bacterial infection, but also may be seen in inclusion blenorrhea of the newborn during the first few months.

A gross papillary hypertrophy gives a cobblestone appearance to the conjunctiva. The papillae are giant and pale in color, and if present on the upper tarsal conjunctiva, especially near the upper border, they are considered almost pathognomonic of vernal catarrh of the palpebral type. Palpebral vernal catarrh is usually associated with a fine, transparent pseudomembrane.

The limbal variety of vernal catarrh is characterized by large papillae and hyperemia near the limbus. Tranta's dots, diagnostic of the limbal variety of vernal catarrh, are small, white, chalky concretions present at the limbus. There may not be an associated pseudomembrane in the limbal variety. Limbal vernal catarrh is frequently asso-

ciated with subepithelial corneal infiltrates at the periphery of the cornea, and the cornea may ulcerate. Vernal catarrh may respond well to local Cortone.

In rare instances, gross papillary hypertrophy is caused by an old, chronic purulent conjunctivitis, especially an old gonorrheal ophthalmia, or a secondary leuetic conjunctivitis. Both of these are rare and tend equally to involve the limbus and upper tarsal conjunctiva. Systemic penicillin is the treatment of choice in either case.

Follicular Hypertrophy. Follicles are typically transparent and greyish in color, and may normally be present in small numbers in the fornices. Follicles occur pathologically in the tarsal conjunctiva and at the limbus.

Follicles present in the upper tarsal conjunctiva immediately suggest trachoma. In most cases the clinical diagnosis of trachoma is satisfactory. Findings by slitlamp of a pannus beginning at the upper part of the cornea when associated with a superficial punctate keratitis are diagnostic. Limbal follicles predominant in the upper limbal regions are pathognomonic of active trachoma. Herbert's pits, clear areas in the limbal margin best seen by retroillumination, are also pathognomonic of trachoma. Treatment of choice in trachoma is the use of systemic sulfonamides and local Aureomycin or Terramycin.

Follicles sparing the upper tarsal conjunctiva suggest folliculosis or a follicular conjunctivitis.

Folliculosis is seen in young children and is probably a non-specific manifestation of generalized lymphoid hypertrophy. The follicles are prominent, but there are no symptoms, no discharge, and no signs of inflammation. Evidence of this hypertrophy is important only because it may be confused with follicular conjunctivitis, in which there is a superimposed bacterial infection.

Follicular conjunctivitis excluding trachoma may be divided into acute, chronic, and toxic or allergic types.

Acute follicular conjunctivitis may be caused by acute follicular conjunctivitis Beál. In Beál's conjunctivitis the follicles are usually very prominent. The bulbar conjunctiva is injected, and a tender preauricular swelling is almost always present. The cornea is not involved, the secretions are scanty, and unilateral cases are common. The disease is self-limited, lasting ten days to three weeks, and there is no satisfactory treatment.

Inclusion body conjunctivitis (Swimming Pool Conjunctivitis) in the adult or, following the papillary hypertrophy, in the newborn is similar to Beál's conjunctivitis except that without treatment it lasts for three months to one year. It is associated with lymph-node involvement. Inclusion body conjunctivitis does not involve the cornea.

Epidemic keratoconjunctivitis is a hyperacute follicular conjunctivitis. The acute phase is characterized by edema of the lids, chemosis, and

hyperemia. The follicular phase is characterized by large follicles in the conjunctiva and occurs after 48 hours. Papillary hypertrophy with hyperemia is present between the follicles. Subconjunctival hemorrhages are frequent. The lymph nodes may be tender and palpable, and a pseudomembrane develops in 65 per cent of the cases after three to five days. Corneal changes begin after about one week, at which time the diagnosis can be made. The corneal changes begin as a mild, superficial punctate keratitis, or as minute, discrete subepithelial dots. Grey, circular and circumscribed opacities later form beneath the epithelium. They are concentrated in the central part of the cornea and persist for months. There is no satisfactory treatment, although the broad-spectrum antibiotics early, and serum from convalescent patients seem to do some good.

Herpes simplex rarely causes massive follicular formation. The diagnosis is easily made when the cornea is involved with the dendritic-type ulcer. Corneal involvement tends to occur early. The conjunctival lesions are self-limited.

Chronic Follicular Conjunctivitis, or orphan's conjunctivitis, has a mild onset and a benign course of two to three years. There are no complications. It is characterized by a large number of follicles involving all of the conjunctiva of the eyelids and the fornices. There is no lymphadenopathy, only very few symptoms, and very scanty secretions. Treatment is symptomatic.

Many of the conjunctivitises present in Parinaud's oculoglandular syndrome are follicular in type.

Toxic or allergic follicular conjunctivitis is a "wastebasket" for all types not specific in nature; the toxic effects produced by the molluscum contagiosum or by the instillation of eserine or pilocarpine may cause a follicular conjunctivitis. Itching and dermatitis are absent here, but are present in the follicular conjunctivitis caused by allergies such as that to instillation of atropine.

Granulomas of the Conjunctiva arise most commonly from buried foreign bodies and ruptured chalazions. They are usually small and single.

Granulomas also occur in oculoglandular conjunctivitis, especially in oculoglandular tularemia. Here there are many granulomas, associated with considerable inflammation. Ulceration tends to occur late in the disease.

In oculoglandular conjunctivitis arising from tuberculosis, the granulomas are less numerous and are associated with isolated conjunctival ulcers.

Leptothricosis produces granulomas which are almost pathognomonic of the disease. The granulomas are small, whitish to greyish in color, and somewhat necrotic, although ulceration does not occur. Excision of the granuloma with penicillin and sulfonamides given systemically appears to be the treatment of choice.

In very rare cases, tertiary syphilis causes a small, dirty granuloma on the bulbar conjunctiva, especially near the limbus. This may proceed to become a dirty, painless ulcer.

Conjunctival ulcers are not common. Isolated ones, however, should immediately suggest tuberculosis. Isolated conjunctival ulcers very rarely occur in primary syphilis; here the ulcer is typically large and punched out, with sharp edges and a grey sloughing base.

Multiple ulcers occur only rarely and are seen in late stages of other granulomatous diseases, especially in oculoglandular tularemia. Multiple ulcers may also occur in acute pemphigus, and here they are shallow and transient.

Enlarged Lymph Nodes. The preauricular, submental, or submaxillary nodes may be involved secondary to involvement of the conjunctiva. The lymph nodes are only rarely enlarged secondary to bacterial conjunctivitis.

Palpable, non-tender or slightly tender but not grossly visible enlargement of the lymph nodes suggests a viral etiology and is commonly seen in acute follicular conjunctivitis Beal and in inclusion body conjunctivitis. In isolated instances it also occurs in acute trachoma, and conjunctivitis arising from molluscum contagiosum.

Tender and visible, but not grossly prominent, lymph-node enlargement occurs frequently in epidemic keratoconjunctivitis and is seen once in a while in acute herpetic conjunctivitis.

Grossly visible lymph-node enlargement is frequently associated with suppuration of the nodes and is characteristic of the oculoglandular syndrome of Parinaud, an infective granulomatous conjunctivitis which, as originally described, most closely fits the conjunctivitis caused by the *Leptothrix*.

Leptothrix conjunctivae is almost always unilateral. The lesions are minute and usually grey to yellow in color, and are opaque and multiple. The disease is associated with an intense follicular hypertrophy with necrotic foci. The lesions do not ulcerate, and the cornea is not involved.

Tuberculous conjunctivitis may also be classed under the oculoglandular syndrome of Parinaud. Here, usually, the tarsal conjunctiva is involved most with yellow-grey subconjunctival nodules. The isolated ulcers that tend to occur may coalesce.

Oculoglandular tularemia has a very sudden onset in which there is marked edema of the eyelids, and severe adenopathy. The disease always becomes systemic and is associated with chills, fever, headache, etc. The conjunctiva is a vivid scarlet, and small, yellowish, and discrete multiple nodules are seen—which picture is diagnostic. Discrete ulcerations occur, the disease persists for from 1 to 3 months, and as it progresses the ulcers become nodular and are covered with a thin membrane. Treatment of choice is the systemic use of

Streptomycin combined with the broad-spectrum antibiotics.

Ocular lymphogranuloma venereum is associated with a chronic edema and infiltration of the eyelid. Indeed those symptoms are almost diagnostic of the disease. The conjunctivitis is typically follicular in type, and it produces progressive scarring of the conjunctiva and the cornea. Systemic treatment with the use of the broad-spectrum antibiotics is the treatment of choice.

Rare causes of grossly visible enlargement of the lymph nodes are: primary syphilis involving the conjunctiva, associated with the chancre; secondary syphilis involving the conjunctiva, in which a dirty painless ulcer is seen; streptothricosis, in which pedunculated granulations and yellow follicles may be seen; sporotrichosis, in which nodules appear, become large and break down to form large ulcers; and chancroid, in which the soft chancre is seen.

SUMMARY

Many of the types of conjunctivitis have been briefly discussed along with their treatments. The discussion has been directed primarily toward helping the physician to make a diagnosis clinically without having to call on the laboratory for help.

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CONFERENCE ON CHILDREN AND YOUTH

The third Governor's Conference on Children and Youth has been called to meet at the Memorial Union, on the State College campus at Ames, on September 24, 1954. Registration will begin at 8:30, and the sessions will extend from 9:30 until about 4:00.

Edward Greenwood, M.D., psychiatrist at the Menninger Clinic, Topeka, will discuss some of the most urgent needs of children and youth, needs which will serve as guides to the areas of mutual responsibility and action. Governor William S. Beardsley will be the noon speaker.

There will be workshops on four subjects of interest to everyone who must give counsel on youth problems: Employment of Youth; Family Life; Youth in Trouble, and Keeping Youth Out of Trouble; and Children in Need of Community Protection.

SURGEONS' MEETING ANNOUNCED

The Iowa Academy of Surgery will meet at Iowa City on September 24 and 25, 1954.

ORIENTATION CONFERENCE

To enable physicians who have been members of the Iowa State Medical Society no more than three years to increase their familiarity with the structure, objectives and activities of the organization, an orientation conference will be conducted at the Society's headquarters, 529-36th Street, Des Moines, on Thursday, September 23, 1954.

Officers of the Society and guest speakers from the medical societies of adjoining states will give brief talks and will compose a panel to which the new members will be invited to address questions.

9:30-10:00 a.m. Registration

10:00-10:10 a.m. Introductory Remarks

Otto N. Glesne, M.D., Fort Dodge
Chairman, Committee on Public Relations

10:10-10:30 a.m. "Ethics Are to Guide, Not to Govern"

Gerald V. Caughlan, M.D., Council Bluffs
President, Iowa State Medical Society

10:30-10:50 a.m. "Legal Problems of Medical Organization"

Mr. I. W. Myers, Des Moines
Legal Counsel, Iowa State Medical Society

10:50-11:00 a.m. Intermission

11:00-11:30 a.m. "That's Where Your Money Goes"

Wendell L. Downing, M.D., Le Mars
Chairman, Board of Trustees
Mr. Donald L. Taylor, Des Moines
Executive Secretary, Iowa State Medical Society

11:30-12:00 noon "Doctor-Patient Relations"

H. Kent Tenney, M.D., Madison, Wisconsin
President, State Medical Society of Wisconsin

12:00- 1:45 p.m. Luncheon (Members attending conference will be luncheon guests of the Iowa State Medical Society)

1:45- 2:00 p.m. "Blue Shield and the Practice of Medicine"

Mr. Wilbur R. Quinn, Des Moines
Director, Physician Relations, Blue Cross-Blue Shield

2:00- 2:30 p.m. "Doctor, Your Public Relations Are Showing"

Mr. Merrill Smith, Lincoln, Nebraska
Executive Secretary, Nebraska State Medical Association

2:30- 4:00 p.m. Panel Discussion

O. N. Glesne, M.D., Moderator
H. Kent Tenney, M.D., Mr. Merrill Smith, Mr. I. W. Myers, Mr. W. R. Quinn, Mr. D. L. Taylor, panel.
(No speeches will be presented by members of this panel. The panel has been arranged for the purpose of answering questions.)

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TURNOVER IN CLIENTELE

Physicians who have been in general practice 20 or 30 years continue, for the most part, to treat the same families year after year. But a survey conducted by the Medical Society of the District of Columbia reveals that the turnover in the clienteles of younger men practicing in the capital is downright startling. The men who have begun work comparatively recently reported yearly changes in their patient rosters that ran as high as 60 per cent, and averaged 35 per cent.

Among the possible explanations for those findings, two or three are likely to encourage complacency. All urban centers contain some of the more mobile elements in the population, and Washington, of all American cities, is probably the place which the smallest share of residents consider "home." In addition, it is to be expected that some years must elapse before a man establishes himself as "the doctor" in the life patterns of a considerable number of people.

Yet, despite such special and mitigating circumstances, the figures point up an alarming trend, and the editorial on the subject in the July issue of the Washington society's journal, *MEDICAL ANNALS*,* doubtless is justified, to a degree, in suggesting that they indicate something lacking in the attitude of younger physicians—a tendency to mask or withhold sympathy and to treat diseases rather than people.

Whether or not young doctors' too slight success at entering into lasting relationships with their patients is principally their own fault, it would do them no harm, once in a while, to take a few moments off for recollection and self-analysis. Each of them—and each of the older practitioners, too—might undertake to recall why it was that he decided to become a physician in the first place. Though it must be admitted that the odds are against one's making a one-way trip to the poor-house after a lifetime in medicine, probably no physician started with the expectation of getting rich. And no more did any practitioner intend, when he started, that his career should be confined to juggling test-tubes and exterminating micro-organisms, with no more than wholly incidental forays for the purpose of gathering specimens from host tissues.

On the contrary, the original incentive of each of the men now practicing medicine, the young ones as well as their elders, was compassion for the afflicted and the maimed. The account which Dr. Howard Rusk gave at the recent Cleveland meeting of the AAGP of his own entry into the profession is an eloquent expression of an experience that is probably typical. "I can't remember when I didn't want to be a doctor," he declared. "Even as an adolescent, when I scrubbed floors and ran errands at the local hospital in order to smell ether and go on rounds with our family doctor, surgery did not spell glamour in medicine to me. It was people—sick people—and the challenge of their suffering, their problems and their victories."

In our profession there is a voluminous technical literature, there are countless formulae and there is a wilderness of statistics. But those are no more than the means to an end. Even the physical and mental health that with increasing frequency—thank God—we succeed in preserving or rebuilding is no more than a means for supporting and freeing the spirit, the individuality and the creativeness of men and women, boys and girls. As Dr. Rusk went on to say, "Those who through medical skill, opportunity, work and courage survive their illnesses or overcome their handicaps take their places back in the world with a depth of spirit which we can hardly measure."

Certainly there is no reason for our failing to let our patients recognize the liking for them and the sympathy for them in their difficulties—the motives that made us choose to be doctors. On the contrary, time and again the moral support they derive from our attention and encouragement has aided our surgical or pharmacological therapy in making them well. For those reasons, each of us should count it a defeat each time a patient strays for no readily discernible reason, and should do what he can to prevent such incidents from recurring, not only for his own but for the patient's good.

* "The General Practitioner's Shrinking Field," *Med. Ann. of the Dist. of Columbia*, 23:399-400, (July) 1954.

WHAT BRINGS MATTERS BEFORE THE GRIEVANCE COMMITTEE?

Ever since our Grievance Committee was authorized in 1950, a yearly analysis has been made of the reasons why problems are brought before it, and it is only correct to say that with the passage of four years, the compelling factors have changed. Many of the matters arise from misunderstandings between doctor and patient. This was most evident in the beginning; it holds true even today, although to a lesser degree. It lies within the power of all of us to correct this situation.

It has been pointed out by many persons that what the public wants today when it longs for the old "horse and buggy doctor" is not the type of medicine he practiced, but his manner of practice. The familiar plaint is that the old family doctor understood his patients, gave them unstinted time, explained as best he could what the medical problem was, and in general, treated them as friends. Many wise physicians have made the statement that, by and large, a less efficient physician with a close rapport with his patients can do them more good than a cold but well-trained clinician. To re-state an old truism, there is both a science and an art to the practice of medicine, and the well-rounded physician should employ both.

Today the Grievance Committee feels it is seeing a new trend in the complaints brought before it. In some cases, when a physician turns over an account for collection, the patient retaliates by bringing suit for malpractice. This could be a lever used by unscrupulous persons for getting bills reduced, although the Committee has no intention now, and never has had, of recommending the reduction of bills that are not excessive. The Committee does feel, however, that some thought should be given to this problem. Possibly physicians should make more of a personal effort, through their own offices, to effect payment. Probably a reasonable amount of time should be spent on this type of collection effort before the account is turned over to a professional collection agency.

We doctors are being taught to be up-to-date in our business methods; we are told that monthly statements should be sent to all patients; and we are urged not to delay too long before turning over uncollected accounts. It may be that in trying to be businesslike, we have erred by seeming too anxious about collections.

It is true that the merchant expects payment on time; the landlord expects his rent in advance. It is true that when we care for a patient and help him with our medical knowledge, we should be paid for the service we have given. For many generations, however, our profession has given unstintingly of its knowledge and has put little stress on the remuneration angle. Maybe we are being too abrupt about the transition. Maybe we should not try to become the most efficient busi-

nessmen overnight, but should proceed more slowly with pushing collections.

There will always be a small per cent of persons who won't pay their medical bills, but this symptom of suing for malpractice does not originate with them alone. It is more widespread than that, and we cannot help feeling that here again, the art of the practice of medicine should be given more prominence. The closer a physician is to his patients, the less apt he is to have misunderstandings about bills, or suits for malpractice. At any rate, there's food for thought in this new trend, and we hope our members will not dismiss it too lightly.

THROMBOCYTOPENIC PURPURA

Few things are more satisfying, more beneficial, more elusive and less frequently sought than an understanding of the mechanisms of disease. Thrombocytopenic purpura has eluded etiological analysis for years. Dr. Carl Moore, reporting at the 1954 College of Physicians meeting, explained one mechanism which was new to his listeners. This is the mechanism of the platelet agglutinin.

Platelet agglutinins have been isolated in the serum of some patients with thrombocytopenic purpura. These platelet agglutinins destroy platelets. (1) If one injects plasma or serum from a patient suffering from thrombocytopenic purpura into a normal recipient, the latter suffers an immediate drop in blood platelets lasting from one to five days. (2) Platelets transfused into a normal person last four days—platelets transfused into a patient with thrombocytopenic purpura last four hours! (3) In patients with thrombocytopenic purpura, one can demonstrate *in vitro* platelet agglutination. (4) Preliminary observations suggest that in patients *without* platelet agglutinins, splenectomy is only 20 per cent beneficial, whereas in patients *with* platelet agglutinins, splenectomy is of benefit in 90 per cent of instances.

Thrombocytopenic purpura which is the result of certain drugs (sudormid, quinine or quinidine) results from a chemical attachment of the drug onto the platelet. An antigen is thus formed which in turn produces an agglutinin causing the purpura. Some thrombocytopenias do not have serum agglutinins. These are best treated with ACTH or cortisone, for these agents increase capillary resistance. Other thrombocytopenias are associated with maturation—arrest of the megakaryocyte. The mechanisms for this arrest have not been elucidated.

The entire answer to the problem has therefore not been elicited, but certainly a reasonable *partial* explanation for the disappearance of platelets has been offered. A practical prognostic criterion may have been established for those individuals in whom splenectomy is being considered. The platelet agglutinin is another "peg to hang our hats on."

IOWA NURSING HOME ASSOCIATION

Because each year we practicing physicians have more elderly, invalid patients to care for, and because each year more of these patients are transferred to nursing homes, it gives us a glow of satisfaction to realize that a small nucleus of nursing home supervisors are trying to "raise themselves by their own bootstraps."

The American Nursing Home Association has been in existence about ten years. It is dedicated to the improvement of the nursing-home situation. Last year the Iowa Nursing Home Association joined the national organization and will participate in its national meetings. In Iowa, 150 of the 606 nursing homes belong to this organization.

The Iowa organization has recently concluded its second annual *educational week* in conjunction with Drake University. Nursing-home supervisors from over the state attended a week-long series of lectures and meetings covering a wide variety of topics pertinent to the nursing-home problem. Another meeting is planned for 1955.

These forward-looking people are doing their best to improve the nursing homes. Three cheers for the Iowa Nursing Home Association!

POSTGRADUATE COURSES IN KANSAS CITY

Detailed programs are now published for two of the sixteen postgraduate short courses to be offered at the University of Kansas Medical Center, in Kansas City, Kansas, during the coming academic year.

The faculty for the conference on obstetrics, to be held November 8-10, includes J. I. Brewer, M.D., of Northwestern University; F. B. Carter, M.D., of Duke University; C. P. Huber, M.D., of Indiana University; R. A. Kimbrough, Jr., M.D., of the University of Pennsylvania; C. J. Lund, M.D., of the University of Rochester; W. F. Mengert, M.D., of the University of Texas; and L. A. Calkins, M.D., Charles A. Hunter, Jr., M.D., and R. L. Newman, M.D., of the University of Kansas. Topics to be covered are "Fibroids and Pregnancy," "Placenta Previa," and "Premature Separation." The registration fee is \$30.

The refresher course dealing with on-the-job injuries, to be held in Kansas City December 6-8, 1954, is designed to meet the problems of general practitioners, all of whom are engaged to some measure in industrial practice, whether they are aware of the fact or not. Papers to be delivered deal with such subjects as "How to Improve the Handling of Compensation Records and Reports," "Pre-placement Examinations and Periodic Health Audits," "Alcoholism and Industry," "Dermatoses on the Farm," "Animal Disease and Human Health Problems," "Carbon Monoxide: A Danger of the Farm and Home," "Occupational Pulmonary Dust Diseases (Pneumoconioses)," "Poison Gases Encountered in Rural Occupations," "Pitfalls in the

Treatment of Pesticide Poisoning," "Noise and Hearing Problems," "Occupational Affections and Trauma of the Eye," and "Diagnosis of the 'Occupational Back.'" The faculty is to be made up of leading industrial physicians, private practitioners, professors of medicine and lay authorities in industrial management and workmen's compensation.

The complete list of K.U. postgraduate courses in medicine for 1954-55 follows:

- Nov. 8-10 Obstetrics
- Nov. 15-18 Internal Medicine
- Dec. 6-8 Industrial & Occupational Medicine
- Jan. 17-20 Surgery
- Jan. 24-27 Clinical Neurology
- Feb. 10-11 Annual Heart Conference
- Feb. 14-17 Radiology & Radioactive Isotopes
- Feb. 24-26 Metabolic Diseases
- Mar. 7-8 The Pathology of Crime—a Conference for Coroners, Law Enforcement Agents and Pathologists
- Mar. 10-12 Hematology
- Mar. 14-16 Pediatrics
- Mar. 21-24 Electrocardiography
- Apr. 4-8 Ophthalmology & Otolaryngology
- Apr. 11-13 Anesthesiology
- Apr. 11-13 Chest Diseases
- Apr. 14-15 Gastroenterology

Programs for each of these courses can be had, as soon as they are printed, from the Department of Postgraduate Medical Education, University of Kansas Medical Center, Kansas City 3, Kansas. Each of them is fully accepted by the AAGP for formal postgraduate-education credit.

OSTEOPATHS APPROVE ON-CAMPUS STUDY

The House of Delegates of the American Osteopathic Association, meeting in Toronto, Ontario, July 15, approved on-campus inspection of D.O. schools by an AMA committee to determine the quality of medical education provided there.

The AMA Committee for the Study of Relations Between Osteopathy and Medicine had reported to the doctors of Medicine in San Francisco, less than a month earlier, that "the justification or lack of justification of the 'cultist' appellation of modern osteopathic education could be settled with finality and to the satisfaction of most fair-minded individuals by direct on-campus observation and study of osteopathic schools," and recommended that permission be secured for such visitations.

Commenting on his group's acceptance of the AMA's proposal, John W. Mulford, D.O., of Cincinnati, president of the American Osteopathic Association, said he and his colleagues are confident that neither the osteopathic profession nor the medical profession wishes to inflict its officialdom on the other, and that the arrangement now agreed to could be considered a logical outgrowth of the mutual respect which the two schools of healing hold for each other.

ARTHUR D. WOODS, M.D.
1881—1953

Memorialis

Arthur D. Woods was born August 4, 1881, at Goodland, Indiana. His parents moved to Iowa a short time afterward, and he lived in Iowa continuously thereafter.

He was a graduate of the Greenfield High School and received his M.D. degree from the State University of Iowa in 1906. From 1906 to 1908, he was an instructor in anatomy at the University of Iowa medical school.

In 1908, he moved to Melbourne, Iowa, where he practiced until 1911, when he moved to State Center. He practiced in State Center for 42 years, until his death on August 17, 1953. He was surgeon for the Northwestern Railway, at State Center, for 30 years.

He took postgraduate work at the Harvard Medical School and Massachusetts General Hospital, in Boston, during the summers of 1910, 1912 and 1920.

Dr. Woods was a past president of the Marshall County Medical Society and for many years served in the House of Delegates of the State Medical Society from Marshall County; he also served several years in the House of Delegates of the American Medical Association.

For nine years, 1943 to 1952, Dr. Woods was a member of the State Board of Medical Examiners, serving at different times as secretary and as chairman of the Board. He was prominent in publicizing the need for revision of the laws of Iowa pertaining to licensure which was brought about during the 55th General Assembly.

He served as Moderator on a number of Television programs sponsored by the Iowa State Medical Society from Station WOI-TV, Ames, during 1951.

Dr. Woods filled many important positions in connection with the Iowa State Medical Society and on several occasions had an important part in debate upon controversial issues that came before the House of Delegates of the American Medical Association. Dr. Woods was chairman of the Section on Internal Medicine twice. He contributed many scientific articles to Iowa medical literature.

He was married in 1906 to Allie Boer, who died in 1919. To them were born two children, Dan W. Woods, an attorney at State Center, and Margaret L. Woods, who teaches in the schools at West Des Moines. In 1925, he married Eldora Beintema, who also survives.

All his life Dr. Woods had been a hay-fever victim. He tried many of the treatments, but they did not help him. Since 1922 he had spent part of August and September at some place outside of Iowa. Several times he went to Estes Park, Colorado, where he found relief, but in 1939, during a visit to Yellowstone Park, he discovered the little village of Silvergate, Montana, at the northeast entrance of Yellowstone Park. It seemed to



be an ideal spot for him—no pollen and good fishing.

As usual Dr. and Mrs. Woods left for the lodge at Silvergate the first week in August, 1953. Near Billings, Montana, Dr. Woods suddenly became ill and was taken to the Billings Hospital. At first his condition was not considered critical. But three days later, he had a serious coronary attack. He rallied and was quite comfortable all day Monday. But late in the evening, as his wife sat beside him, he died.

Dr. Arthur D. Woods will live long in the annals of Iowa Medicine. He was a warm friend—kindly—likeable. He spoke a plain, understandable language. He was neither bitter nor vindictive in debate. Always a gentleman of the old school, he was a martyr to the principles by which he lived.

CLYDE A. HENRY, M.D.

BLUE SHIELD COST CUT PROPOSED

Wisconsin Blue Shield could reduce the cost of its program 25 per cent if it were to stop paying for items which have benefits of \$35 or less, Carl A. Tiffany, of Chicago, consulting actuary for the Wisconsin Physicians Service told the Commission on Prepaid Plans at Madison. He pointed out that it costs Blue Shield of Wisconsin \$3 to pay every claim. The meeting which he addressed was called for the purpose of completing administrative details for a major-illness policy.

LETTER TO THE EDITOR

This letter is directed to the author or authors of "Can This Be Your Trouble?"—appearing in the August issue of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY.

The mildest comment I can make on this article is that it constitutes a rank injustice as far as many physicians' employees are concerned. Being a registered nurse, my opinion stems chiefly from my experiences in nursing (including about five years of office nursing); however, since you made no distinction between the two in your accusations, I shall defend both the clerk-typist and office nurse.

The technique used in this article is an old method used to damage the reputation of others (apparently to bolster one's own morale): When attacking a subject, sprinkle a few grains of truth over your bed of iniquity.—I do not doubt the validity of the examples you cite, nor, regrettably, do I deny that more might be cited. But I do resent the general implication of the article—that most physicians' employees are incompetent, indeed more, (and I quote) "that the avidity with which the public receives articles critical of Medicine in current magazines is traceable principally to his employees' mishandling of his patient contacts."

Before commenting further on your opinions, I would make the following observations:

1. That no profession (including the medical and nursing professions) or occupational group is entirely above reproach.

2. That I agree that a "major gripe that rankles in a patient's mind is the amount of time he has to waste in the waiting room before he gets in to see the doctor."

3. That physicians' employees (receptionists and nurses) can exert a tremendous influence in public relations—for good or bad—as regards themselves and indirectly the medical profession.

In regard to the first point, unfortunately the misdeeds of a few cast aspersions on the group and detract from the good done by many, but it is certainly most unjust to use the standards of a few as a criterion of the entire group. By the same token it is not fair to regard only the misdeeds of any one individual, disregarding the good that he does.

The second point is certainly deserving of further realistic study to secure possible solutions. I fail to see where you have provided any constructive suggestions to remedy the problem considered, except, as you so emphatically pointed out, to employ competent assistants. There may be some office girls who as you say "may enjoy basking in the borrowed importance which her association with the medical profession has given her . . . [and] who is intent upon making the office seem busier than it is"; you say "they are legion"? They are a rare bird among my acquaintances.

The office nurses and girls I know are decent individuals who like to have their patients see the doctor on time. Such an arrangement not only keeps the patients happy, it enables the doctor and his employees to go home at an earlier hour. Personally, with all due respect to the medical profession, I have encountered a physician or two with whom I would not care to be associated, let alone "bask in the borrowed importance" of such an association.

So much for your opinion. Now as for the problem itself, I would like to cite some examples and ask some questions, with particular reference to general practice. (Perhaps the time for a specialist's procedures can be more closely gauged; I would not know.) Here is a situation: The appointment book, scheduled at fifteen minute intervals, is filled for a week in advance. Mrs. B. (and she is not the only one during the day) calls, insisting that she must see the doctor *today*. From the symptoms enumerated, the receptionist or nurse is aware that Mrs. B., who invariably stays for half an hour when she gets into the doctor's office, could wait for a definite appointment, but what can the office girl do? Should she tell Mrs. B. that her complaints do not constitute an emergency and that the doctor cannot see her until next week? Handle a few such situations that way and you may help correct the timing of appointments, but what sort of public relations would you develop? A nurse may sometimes think she has diplomatically postponed such a patient's visit, only to learn that the patient has called back to talk to the doctor directly. Now that it is his problem, what does he do? More often than not he tells Mrs. B. to come in—what else can he do? (If you have not encountered such patients, you have not partaken of general practice.) Then Mrs. C., Mrs. D., and Mrs. E. (and on some days it seems, the rest of the alphabet) call in—"Mary has a sore throat—fever 103," "Johnny has stepped on a nail," "My husband is having severe chest pain," etc. . . . Obviously they have to be seen—not next week, but today. But when? The appointments are filled. Make them wait until all the appointments have been seen? Would you be content to wait until the end of the day to see the doctor if your little girl were acutely ill in the morning? Set aside certain periods of the day for such emergencies, you may say—but unfortunately these calls do not all come in at 9 a.m. to facilitate such a nice arrangement—they are coming in all day long. And if such specific times were set aside and no acute cases were forthcoming, would you waste such time when the doctor could be seeing a routine case who might otherwise resent having to wait probably two weeks for a definite appointment with such an arrangement in force? . . . Take another day—everything is breezing merrily along with "a steady stream of patients moving into and out of the waiting and examining rooms" when the physician is called out for an accident case entailing an hour

or more of work at the hospital. What about appointment times then? Remember, the book is filled for the next week. . . . And what do you do with patients who wander in without appointments, but whose condition warrants treatment that day? . . . And what about the patient who, having made an appointment for himself, comes in at the appointed time bringing with him his wife and two children who, when the patient is called in, come along for a "check-up," too?? . . . The foregoing examples (and I could cite more) are not exceptions to the rule; they are almost daily occurrences.

Furthermore, how are we to know when we are scheduling appointments a week or more in advance whether or not the doctor will be in on time on any given day? Delays at the hospital may be unavoidable as far as the physician is concerned, but we girls have no crystal ball to predict such delays.

Now, sir, find me an *efficient girl* who can compensate for all these factors and still manage to keep the appointments on time. I will admit that I have not found the solution to the problem. But *I do not* believe that (and I quote) "In most cases, however, it is the office girl who is at fault"! May I make one more observation before leaving this disturbing subject? In my estimation this problem exists, partially at least, because many doctors have too heavy a patient load. I think that there is a need for more physicians (as well as for more nurses) at the present time. Too many doctors are overworked; they have too little time to spend with their patients. Of course I realize that this matter is outside my realm.

Back to my third point—public relations and physicians' employees. Certainly the personnel in a physician's office contribute a great deal to the patients' general impression. Consider the physician's role in this respect. Your journal is printed primarily for the medical profession, I presume, and what say ye?—"The physician is cordial, considerate, thorough, and efficient. The patient has every reason to believe that he must be quite unaware of the horrible way in which his outer-office business is being mismanaged." I say that if the physician is efficient, he will *make it his business to find out* how his outer office is being managed. If he is considerate and thorough, he will endeavor to hire competent personnel, and to instruct them specifically as to how he wants them to deal with his patients. Furthermore, if he is wise, he will pay an adequate salary which will attract and keep qualified personnel. He will encourage his office nurse to belong to her professional organizations, so that she might share her ideas with other office nurses and strive to improve standards of office nursing.

Returning to my original contention, I maintain

that you have done an injustice to the integrity of many who are doing their best to serve their physician-employers and the public well. If I did not respect my employer and if I did not feel that he has confidence in me, I would not be working for him. So my bitter objection to your article is not prompted by personal dissatisfaction. But I believe in giving credit where credit is due, and nowhere in your article do I find one word of commendation for any physicians' employees. I suggest that you improve your public relations by reading and heeding point number six under "How to Cure Dis-ease in Your Auxiliary" which, ironically, also appears in the August issue of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY: "Criticism can be constructive. I like to praise and reward loudly, to blame quietly." Would that you had a "readers' retort" column; I would sincerely like to receive serious answers to the questions I have asked, and more than that I could ask.

Respectfully yours,
Marian L. Winn, R.N.
912 W. Sixteenth St.
Davenport, Iowa

HISTORICAL MANUSCRIPTS REQUESTED

Members of the Historical Committee:

Please mail all historical manuscripts intended for publication in the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY to Dr. Jeannette Dean-Throckmorton, State Medical Librarian and Secretary of the Historical Committee, Historical Building, Des Moines 19, Iowa. Dr. Throckmorton will have editorial supervision.

Approximately one-third of the 99 Iowa Counties are without medical histories. Many of us are yet living who had contacts, direct or indirect, with the men who practiced medicine a century ago. The doctors of those days engaged in every field of human endeavor, many of them with great success. As chairman of your Committee, I urgently request that each of you join me in an all out effort to complete these histories. You will find helpful reference data in the Centennial Volume, beginning on page 182, "City, District and County Medical Associations." Please write me directly as you make contacts for writing county histories. These accounts should of course be as brief as the material submitted will permit.

The Annual Meeting of the Iowa Academy of General Practice will be held on September 22 and 23, at Hotel Savery, Des Moines. Will you attend on September 23 as a member of our Committee?

As you no doubt already know, all committee chairmen are requested to report to the officers of the State Society before the close of the year as to the activity of their committees. Please write to me at once. I need your help.

CLYDE A. HENRY, M.D.
Chairman of the Historical Committee
Farson, Iowa

FUNDS GIVEN TO SUI MEDICAL SCHOOL

The State University of Iowa's College of Medicine was granted \$32,343 by the National Fund for Medical Education on July 19. This remittance brings the total gifts to the school from this source to \$100,927 over the past four years.

Grants are unrestricted as regards total amount. From non-earmarked funds, the Foundation distributes \$15,000 to each of the 74 four-year medical and 6 two-year basic-science schools in the country, plus \$25 for each student enrolled. Then the contributions made to the NEF specifically for the benefit of the particular school are added in. The schools are not told how they shall make use of the money, but most of them utilize it in establishing new teaching positions and setting up new courses and research projects.

Individual doctors and local medical societies contribute to the fund through the American Medical Association, and business firms make gifts through the Fund's Committee of American Industry.

Since it was established in 1951, the Fund has disbursed \$6,941,057.25.

LOCAL TELECASTS RESUME SEPTEMBER 17

The fourth consecutive season of Iowa State Medical Society telecasts over station WOIT-TV, Ames, will begin with the program "What the Doctor Does in a Physical Examination," at 9:30 p.m. Friday, September 17. Succeeding weekly programs will be broadcast on the same day of the week and at the same time. Each will be thirty minutes in length.

The series will consist of 26 presentations, the first 13 of which will conclude with the program of December 10. The fourteenth will not be shown, then, until January 21, but thereafter there will be one each week until April 22.

As in the past, the topics discussed before the television camera will be those in which Iowa physicians have reason to think their patients are most interested. From time to time there will be groups of programs on closely related problems, such as pregnancy or the work-up of an operative case, but in no instance will the presentations in successive weeks be so closely related that a viewer must see both to get maximum benefit from either one. Doctors who are in private practice or who are professors at the S.U.I. medical school will continue to constitute the majority of the castes of characters, but lay people will also be used. In particular, the device of having a moderator to ask questions of the doctors will be used with increased frequency.

Plan to attend the Iowa State Medical Society's Annual Meeting, April 24-27, 1955, in Des Moines.

SOUTHWEST CLINICAL SOCIETY CONFERENCE

The Fall Clinical Conference of the Kansas City Southwest Clinical Society, to be held on October 4, 5, 6 and 7, 1954, is to include lectures by Hans Selye, M.D., Montreal, an internist, on "Stress and Disease"; T. G. Blocker, Jr., M.D., Galveston, a plastic surgeon, on "Nutrition in the Severe Burn"; William Boyd, M.D., Vancouver, a pathologist, on "Hepatitis and Cirrhosis" and on "Tumors and Cysts of the Neck"; W. E. Brown, M.D., Little Rock, an obstetrician-gynecologist, on "Menopause" and on "Nutrition in Pregnancy"; Justin Cordonnier, M.D., St. Louis, a urologist, on "Steps for Urological Diagnosis"; Michael E. DeBakey, M.D., Houston, a surgeon, on "Surgical Considerations of Acquired Diseases of the Aorta"; J. F. Holt, M.D., Ann Arbor, a radiologist, on "Present Concepts of Chest Roentgenology in Infants and Children"; John R. Lindsay, M.D., Chicago, an otolaryngologist, on "Vertigo: Differential Diagnosis and Management"; C. A. Moyer, M.D., St. Louis, a surgeon, on "Clinical Signs of Fluid Imbalance"; Lucian A. Smith, M.D., Rochester, Minnesota, a gastroenterologist, on "Pain Patterns in the Diagnosis of Chronic and Recurrent Diseases of the Abdomen"; W. A. Sodeman, M.D., Columbia, Missouri, an internist, on "Glomerulosclerosis"; Tom D. Spies, M.D., Birmingham, Alabama, an internist, on "Vitamins and Other Nutrients in the Day-to-Day Practice of Medicine"; Alex J. Steigman, M.D., Louisville, a pediatrician, on "Acute Glomerulonephritis in Childhood"; Frank E. Stinchfield, M.D., New York City, an orthopedist, on "Criteria for Spine Fusion with Use of 'H' Bone Graft Following Disk Removal"; Travis Winsor, M.D., Los Angeles, an internist, on "The Management of Cardiac Arrhythmias"; and Robert M. Zollinger, M.D., Columbus, Ohio, a surgeon, on "Preoperative Evaluation for Major Surgery."

Color television is to be used for clinical demonstrations of "Purposeful Splinting," "Peripheral Arterial Disease," three heart pathologies, "Mechanical Aids in Bulbar Poliomyelitis," "Autopsy," "Sternal Puncture," "Thoracentesis," "Topical Urethral Anesthesia in the Male and Female," "Skin Grafting," "Repair of Incisional Hernia," "Open Reduction of Fracture of Hip," "Correction of Patent Ductus Arteriosus," "Tumors of the Breast," "Carcinoma of the Cervix," and "Total Hysterectomy."

There will be scientific and technical exhibits of considerable interest.

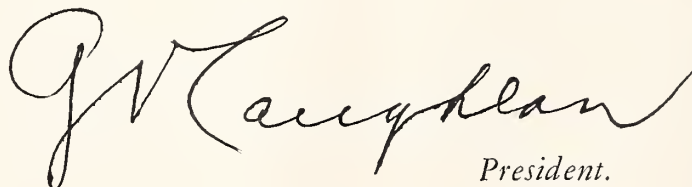
Members of the American Academy of General Practice will receive credit for the actual hours of attendance toward the 50 hours of formal post-graduate study required every three years. The annual dues to the Kansas City Southwest Clinical Society, payment of which is prerequisite to attendance at the conference, are \$20.00, but that sum covers tickets to luncheon meetings and the annual dinner-dance as well as admissions to other sessions.

President's Page

On August 5, I attended the meeting of the Upper Des Moines Valley Medical Society, at Okoboji. Also present were the three trustees of your Society, Drs. Wendell L. Downing, George H. Scanlon and Fred Sternagel. This was the first of contemplated visits by the above named, to bring to the physicians of Iowa a knowledge at first hand as to the activities of the Society.

Dr. Scanlon spoke regarding the Educational Loan Fund, Dr. Downing outlined the finances of the Society and the conduct of the headquarters, and Dr. Sternagel presented the problem of medical care of veterans for non-service-connected disabilities. He also discussed the Blue Shield. As the last speaker, I continued the discussion of Blue Shield and spoke of other activities of the Society, including the Speakers' Bureau, the television programs at Ames, the coming orientation program for new physicians in Iowa and the annual meeting for county society presidents and secretaries.

All of the talks were well received, and many of the physicians spoke highly of the value of such visits by state officers.



J. W. Laughlan
President.

Iowa Academy of General Practice

President—Paul F. Chesnut, M.D., Winterset

President-Elect—Frank D. McCarthy, M.D., Sioux City

Vice-President—Dean C. Snyder, M.D., DeWitt

Secretary-Treasurer—William M. Sproul, M.D., 912 Equitable Bldg., Des Moines

Executive Secretary—Mrs. Elizabeth Nelson, 3600 Franklin, Des Moines

SCIENTIFIC SESSION AND ANNUAL MEETING HOTEL SAVERY, DES MOINES

WEDNESDAY, SEPTEMBER 22

8:00 a.m. REGISTRATION (Mezzanine Floor)

9:30-11:30 "SYMPOSIUM ON ANEMIA"

Anemia due to

(a) Iron Deficiency

(b) Pernicious Anemia

(c) Infections and Malignancies

(d) Hemolysis

J. M. Stickney, M.D., Consultant and Head,
Section of Medicine, Mayo Clinic, and
Associate Professor of Medicine, Mayo
Foundation, University of Minnesota

Talbot Cooper, M.D., Consultant in Med-
icine, Mayo Clinic, and Assistant Pro-
fessor of Medicine, Mayo Foundation,
University of Minnesota

11:30-12:00 QUESTION-AND-ANSWER PERIOD

12:15- 2:00 LUNCHEON

Speaker to be announced

2:00- 2:20 "TREATMENT OF HODGKIN'S DIS-
EASE AND LYMPHOBLASTOMA"

Talbot Cooper, M.D.

2:20- 2:40 "TREATMENT OF LEUKEMIA"

J. M. Stickney, M.D.

2:40- 3:00 QUESTION-AND-ANSWER PERIOD

3:00 ANNUAL MEETING AND ELECTION OF
OFFICERS

6:30 RECEPTION AND COCKTAIL HOUR

7:00 BUFFET DINNER

Presentation of Recognition Pins to Ex-
Presidents and to Mrs. E. E. Shaw
Dedication of One Lecture at Each An-
nual Meeting to Dr. Ernest E. Shaw
Presentation of Award for Winning
Essay Contest on "Preceptorships"
No formal program to follow

THURSDAY, SEPTEMBER 23

8:00 a.m. REGISTRATION

9:00-10:30 "CONGENITAL MALFORMATION OF
THE UROGENITAL SYSTEM"

Willard M. Allen, M.D., Professor and
Head, Department of Obstetrics and
Gynecology, Washington University,
Saint Louis, Missouri

10:30-12:00 "MANAGEMENT OF HYPERTENSION
WITH SPECIAL REFERENCE TO NEW-
ER METHODS OF TREATMENT"

Francis D. Murphy, M.D., Clinical Profes-
sor and Head of Department of Med-
icine, Marquette University, and Medical
Director, Milwaukee County Hospital,
Milwaukee, Wisconsin

12:15- 2:00 LUNCHEON

Address—"Experiences as a Spy for
Stalin"

Countess Maria Pulaski. (A startling story
from behind the Iron Curtain. Decidedly
unusual and instructive.)

2:00- 3:30 THE DR. ERNEST E. SHAW LECTURE
"ACUTE RENAL INSUFFICIENCY, IN-
CLUDING ACUTE TOXIC NEPHRO-
SIS"

Francis D. Murphy, M.D.

3:30- 5:00 "CESAREAN SECTION—IS AN INCI-
DENCE OF FIVE PER CENT JUSTIFI-
ABLE?"

Willard M. Allen, M.D.

Registration

Members—no charge

Non-members—\$5.00

The Program Committee thinks that this is one of
the best programs offered. The speakers are all em-
inently qualified in their fields and have been heard
previously by many. This will be a program you can
ill afford to miss. Plan to attend.

Bring a friend and do not hesitate to ask him to
fill out an application blank for membership in the
Academy of General Practice. There will be blanks
and information available at the registration desk for
anyone interested.

COMING PROGRAMS

November 4, 1954—Hotel Montrose, Cedar Rapids

Speakers: Priscilla White, M.D., Joslin Clinic, Bos-
ton, Massachusetts

Lee Forrest Hill, M.D., Des Moines, Iowa

January 20, 1955—Des Moines, Iowa

Program by the Staff of Iowa Methodist Hospital
Guest Speaker: M. Edward Davis, M.D., Chicago,
Illinois

May 19, 1955—Hotel Savory, Des Moines, Iowa

A Lederle Symposium on "Heart Disease"

Speakers (incomplete list):

1. Harold C. Wiggers, M.D., Dean, Albany Medical
College, Albany, New York

"Recent Advances in Cardiac Physiology"

2. J. S. Butterworth, M.D., New York City

"Electrocardiography in General Practice"

3. Leo Loewe, M.D., Brooklyn, New York

"Bacterial and Inflammatory Diseases"

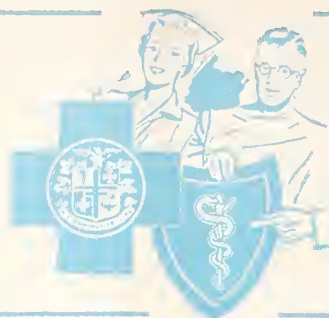
4. Dwight E. Harken, M.D., Boston, Massachusetts

"Indications for Heart Surgery"

5. Joseph G. Benton, M.D., Bellevue Medical Cen-
ter, New York City

"Rehabilitation of the Patient With Cardiovas-
cular Disease—An Increasing Community Re-
sponsibility"

BLUE CROSS



BLUE SHIELD

Blue Cross-Blue Shield Plans—A Public Trust

When one considers the problem of prepayment of health care three major factors must be kept in mind—the public, the doctor, and the hospital.

The public is prone to illness and injury. If this were not true, there would be no need for physicians or hospitals. Yet illness and injury do occur, and when they do, the public calls on the medical profession for help because only doctors know how best to restore health.

The doctor, in turn, generally calls on a hospital, for it is there that his patient best receives the care that he, the doctor, prescribes.

It is apparent, then, that the three principals are closely related. Blue Cross, its member hospitals, Blue Shield and its member doctors, merely bring the principals together. Blue Cross and Blue Shield, working together, have afforded the haven of protection sought by the public.

We want to make one point clear. There are two Blue Cross Plans in Iowa, each with a separate corporate structure and a separate governing board. Blue Shield is a separate entity with its own governing board of fourteen (14) doctors and six (6) lay individuals.

Blue Cross is the hospitals' agency. Blue Shield is the doctors' agency. It is only because the three organizations are so closely allied in purpose and method of operation that there is any relationship, such as joint billing practices, joint sales organizations, statistical information, etc.

Blue Cross and Blue Shield have recognized from the start that there are basic differences between hospital economics and medical economics, and the structure and operation of the Plans have been governed accordingly.

Although Blue Cross and Blue Shield are separate organizations, their objectives are identical: To provide the greatest protection against unexpected costs of illness to the greatest number of people, at the lowest possible cost.

This, the public seeks; this the medical profession provides through Blue Shield and the hospitals provide through Blue Cross. Blue Cross-Blue Shield are a part of the team fulfilling a public trust for the benefit of the people of Iowa.

It is therefore apparent that doctor-hospital cooperation is of prime importance to the future of Iowans' health care. Blue Shield is the Iowa doctors' best public relations tool.

People want the best care possible at a price they can afford to pay. The doctor is looked upon by the public as a man of great trust. That trust must be exemplified in proper guidance by the medical profession of their sponsored Blue Cross-Blue Shield Plans.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

THE PHYSICIAN AND HIS PRACTICE, by *Joseph Garland*, M.D. (Boston, Little, Brown & Company, 1954. \$5.00).

OFFICE GYNECOLOGY, by *J. P. Greenhill*, M.D. (Chicago, The Year Book Publishers, 1954. \$7.75).

ART AND PRINCIPLES OF ANESTHESIA, by *Phyllis A. Roberts*, R.N., and *L. C. Nelson*, M.D. (St. Paul, The Northland Press, 1954. \$3.00).

LECTURES ON GENERAL PATHOLOGY, by *Sir Howard Florey*. (London, W. B. Saunders Co., 1954. \$13.00).

EMERGENCY TREATMENT AND MANAGEMENT, by *Thos. Flint, Jr.*, M.D. (Philadelphia, W. B. Saunders Co., 1954. \$5.75).

BOOK REVIEWS

PRACTICAL FLUID THERAPY IN PEDIATRICS, by *Fontaine S. Hill*, M.D. (Philadelphia, W. B. Saunders Company, 1954. \$6.00).

This latest monograph concerning fluid therapy is presented at the level of the clinician charged with the care of infants and children. The author has presented the material in a logical manner by first introducing terminology and a summary of scientific data, then presenting a discussion of the clinical aspects. The thesis is not overburdened with a lot of the controversial data and theoretical concepts which often discourage the average clinician in his study of fluid-balance problems. However, the monograph is not weakened by being grossly incomplete.

The clinical chapters are divided systematically into an introduction of the clinical state, the clinical manifestations (with case reports, pathophysiology, laboratory findings, treatment), and a brief summary. In general, this monograph is well written and concise in its content. It should serve as a useful guide to the clinician treating children.—*M. E. Alberts*, M.D.

MUSIC THERAPY, edited by *Edward Podolsky*, M.D. (New York, Philosophical Library, 1954. \$6.00).

This is a reasonably inclusive compendium of 32 separate articles dealing with various aspects of music as applied in a medical framework.

While 19 of the 32 sections are devoted to the values of music in the psychiatric field, this being the area in medicine where most energies have been concentrated to date, the remaining 13 chapters receive much more space (sixty-three more pages to be precise).

The sections run the gamut from "The Use and Therapeutic Value of Music in the Hospital and Operating Room" to "Control of Athetotic Tremors by Sound Control" and from "Music as an Adjunct to Electroshock Therapy" to "High Fidelity and Music Therapy."

Generally, the articles are well presented and of a high order. The weaker ones seemed to be those written by the musical therapists themselves, where their understandable enthusiasm would be more commendable if modified by a little more objectivity concerning what is basic and what is adjunctive or catalytic

in therapy. However, the compendium makes a strong appeal for the addition of a musical therapist to the medical team.

Physicians with an interest in music will certainly find this book worth reading. However, despite the diversity of its appeal to different areas in medicine, this book will be most useful to personnel of psychiatric hospitals.—*Herbert C. Merrillat*, M.D.

ANESTHESIA IN GENERAL PRACTICE, by *S. C. Cullen*, Fourth Edition (Chicago, Year Book Publishers, 1954. \$5.00).

The subject matter of this book, like previous editions as well as other publications by the same author, is presented in an easy-to-read and interesting manner, with plenty of illustrations and charts.

Much has been added to the knowledge of anesthesiology since the first publication, and these additions have been faithfully recorded. The chapter on ventilation gives the answers to several of the older problems in anesthesia. It alone is worth the cost of the new edition.

The action and uses of various morphine substitutes and morphine antagonists are explained. The story of trichlorethylene, helium and xylocaine have been added in the proper sequence. Also, the rapidly expanding knowledge of the muscle relaxants and their antagonists is recorded.

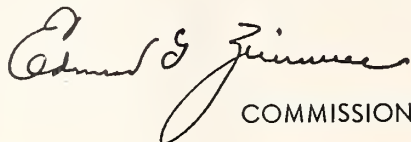
Dr. Cullen's book has for several years been of great value to physicians in the private practice of anesthesiology. This new edition will replace and improve upon the previous version in this respect.—*E. P. Lovejoy*, M.D.

PERIPHERAL CIRCULATION IN MAN, a Ciba Foundation Symposium, edited by *G. E. W. Wolstenholme*, O.B.E., M.A., M.D., B.Ch., and *Jessie S. Freeman*, M.B., B.S., D.P.H. (Boston, Little, Brown & Co., 1954. \$6.00).

This little volume represents the proceedings of a three-day symposium by leading research workers from different countries of the world, brought together as a small group for informal discussion of their work.

There is comparatively little here for the practicing physician, though some of the participants are distinguished in the fields of clinical cardiovascular disease, neurosurgery, and rehabilitation. Physiologists and anatomists will find reports from the frontiers of investigation. Among the topics are: methods for the study of blood flow, changes in circulation in response to extremes of temperature, action of adrenaline and noradrenaline on peripheral flow, neurohistology and reflex control of the circulation, and effects of sympathectomy. The influence of visceral activity on the peripheral circulation has been carefully studied in a series of paraplegics, and valuable observations have been recorded.—*Herman J. Smith*, M.D.

STATE DEPARTMENT OF HEALTH



Edmund G. Zimmerman

COMMISSIONER

CHANGES IN COMMUNICABLE DISEASE RULES AND REGULATIONS

The Iowa State Board of Health at its regular meeting July 13, 1954, made the following changes in the Iowa State Department of Health Rules and Regulations regarding communicable diseases.

Scarlet Fever and related beta hemolytic streptococcal infections (to include scarlet fever with and without rash and septic sore throat):

Changes in regulations do not refer to the case but to contacts of cases. These contacts, according to new regulations, may return to school or to work as food handlers and teachers 48 hours after prophylactic doses of penicillin have been given (600,000 units if given hypodermically). They must present a physician's statement to that effect. The statement must bear the date on which the penicillin was given. If penicillin is not given, the previous restrictions on contacts are to be observed.

Infectious Hepatitis—the new regulations:

1. Increase the period of one week's isolation of the case to cover the period of clinical illness of the case.

2. Require that familial and other contacts of cases of infectious hepatitis not return to school or to their work as food handlers or teachers until they present a physician's signed statement that they have been given prophylactic gamma globulin or any other equally effective material.

3. Require that contacts not receiving gamma globulin or any other equally effective material are to remain away from school or work as food handlers for

- (a) three weeks beyond the period of clinical illness of the case, if they remain in contact with the case, or,

- (b) if contact with the case is broken, three weeks after the last contact with the case.

Ringworm of the Scalp: The child with ringworm of the scalp may remain in school provided he is under medical care and that all hair of the scalp is covered with a washable type of material. He is not to use the school's swimming pool or showers.

As soon as possible all licensed physicians and all city and county boards of health in Iowa will be notified of these changes.

PROPHYLACTIC TREATMENT OF NEWBORN EYES

During the first quarter of this century, one of the hazards of a newborn child was the danger of contracting gonorrheal infection in the eyes during the birth process. During those years we had no specific treatment for gonorrhea, and it was especially difficult to cure a female suffering from this disease. It was found that instillation of a silver preparation into the eyes of the baby immediately after birth would safeguard it against any possible contamination. Through the years, the standard prophylactic treatment has been 1 or 2 per cent silver nitrate.

If this solution was freshly prepared, it caused a minimum amount of irritation, but if the solution was allowed to stand in bottles, the water evaporated and allowed it to become concentrated to the point of being very irritating. To overcome this difficulty, drug companies packaged the solution in small wax ampules with enough material in one ampule to treat one eye. If such fresh solutions are instilled into the eyes of the newborn baby and flushed out with normal saline, there will be very little irritation, but never has such irritation caused permanent damage.

Since the introduction of antibiotics, there has been a trend toward using them to replace the silver nitrate. Antibiotics have posed the following problems:

1. Some antibiotics are not specific against the gonorrheal organism.

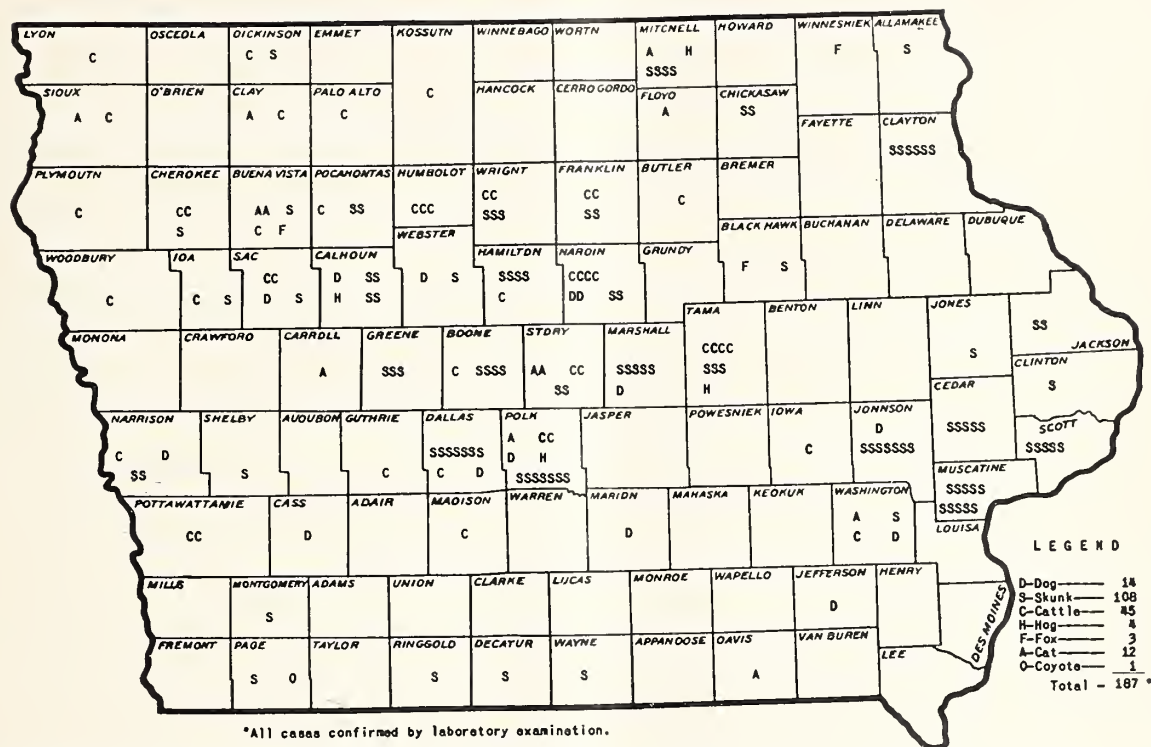
2. Aqueous solutions of antibiotics are very unstable and would be totally ineffective unless they were used in carefully supervised hospitals where the obstetrical service was large enough to warrant the preparation of such solutions daily. The hospital would also have to have a sufficiently well trained staff to be sure that the solutions were adequate.

3. There has been some question as to the possibility of sensitizing a child against the antibiotics used. Such sensitization would preclude the use of the antibiotic in later life when serious illnesses might develop.

On the basis of research work done in the last 10 years, it is now felt that an ointment containing 100,000 units of penicillin per gram will be an adequate prophylactic agent. Drug companies are now making such ointments in tube form. Some of

RABIES IN ANIMALS IN IOWA

Jan. 1—June 30, 1954



Almost 60 per cent of the cases of rabies reported during the first half of this year were skunks. Four persons were reported bitten by rabid skunks and have been given the 14 daily injections of vaccine. Many of the rabid cattle were infected by the bites of rabid skunks.

With this reservoir of rabies in wild animals, it is easily possible that the infection will spread to susceptible dogs. Thus, all dogs should be vaccinated against rabies every year. The dog lives in close association with man and, if not immunized, is the animal most likely to expose man to rabies.

these ointments are soft enough to drop from the tube almost like water. Some of them do not need refrigeration and have a fairly long expiration date.

The law in Iowa requires:

140.36 Prophylactic treatment of eyes. Every physician shall immediately, upon the birth of an infant, instill into the eyes of such newly born infant a prophylactic solution approved by the state department.

140.37 Detection of eye infection. Every physician who shall detect any inflammation, swelling, or redness in the eyes of any infant, or any unnatural discharge therefrom, within six months after its birth, shall immediately treat such child with the prophylactic solution prescribed in section 140.36. Any other person having the care of such child who shall discover any such condition of the eyes, within said time, shall immediately report the same and the location of such infant to the local board.

140.38 Children exempted. Nothing in sections 140.36 and 140.37 shall be construed to require medical treatment for the minor child of any person who is a member of a well-recognized church or religious denomination, and whose religious convictions in accordance with the tenets or principles of his church or religious denomination are against medical treatment for disease.

In view of the above stated facts the State Board of Health in their meeting July 13, 1954, approved the following materials for prophylactic treatment of eyes.

1. One per cent silver nitrate from previously unopened wax ampules, dropped into each conjunctival sac and followed by a normal saline irrigation.

2. An ointment containing 100,000 units of penicillin per gram or 5 milligrams Erythrocin per gram. This action of the State Board of Health will become a rule and regulation as soon as it has been approved by the attorney general and published. For practical purposes, hospitals and physicians may now make use of the specified antibiotic prophylactic treatment.

GERONTOLOGY AND THE GENERAL PRACTITIONER

An institute on Gerontology and the General Practitioner, sponsored jointly by the Institute of Gerontology, State University of Iowa, and the State Department of Health, Division of Gerontology, Heart and Chronic Diseases, is to be held at the Continuation Center, on the S.U.I. campus, Friday, October 1, 1954.

Reservations for rooms can be made by writing to Dr. Wm. D. Coder, at the Continuation Center.

PROGRAM

- 9:00 a.m. Registration at the Iowa Continuation Center
- 10:00 a.m. Characterization of the Aged and Chronically Ill
1. General Personality Characteristics of the Aged
Dr. Wilma Donahue
Chairman, Institute of Human Adjustment
University of Michigan, Ann Arbor
 2. Mental Health of the Aged
Wilbur R. Miller, M.D.
Director, Psychopathic Hospital
College of Medicine, S.U.I.
 3. Intellectual Changes in the Aged
Dr. W. W. Morris
Asst. Dean, Student Affairs
College of Medicine, S.U.I.
- 12:30 p.m. Luncheon, University Hospital Cafeteria
- 2:30 p.m. Scientific Aspects of Gerontology and Its Application to the Practice of Medicine
Wm. B. Kountz, M.D.
Assoc. Professor of Medicine
Washington University School of Medicine
St. Louis, Missouri
- 3:15 p.m. Infectious Diseases in Old Age
Franklin H. Top, M.D.
Professor of Preventive Medicine
College of Medicine, S.U.I.
- 4:00 p.m. Public Health Aspects of the Aging Problem
Cletus L. Krag, M.D.
Director, Division of Special Health Services, U. S. Public Health Service, Washington, D. C.
- 6:00 p.m. Dinner, Veterans Administration Hospital
- 7:30 p.m. Gerontology—Its Relation to Medicine and Society
Edward L. Bortz, M.D.
Assoc. Professor of Medicine
University of Pennsylvania Graduate School of Medicine, Philadelphia
Past President, American Medical Association

IOWA CITY VA DOES ARTERY GRAFTING

Following the award of the AMA's Hektoen gold medal to the Veterans Administration for its scientific exhibit on the diagnosis and surgical treatment of the diseased aorta, at the July meeting in San Francisco, the VA Hospital at Iowa City reported the successful performance of artery grafting in four cases. The patients remained hospitalized from six to eight weeks after surgery.

REPORTING OF MATERNAL DEATHS

The sub-committee on maternal death study of the State Medical Society and the Division of Maternal and Child Health have accepted the following as a definition for maternal death:

"A maternal death is any death occurring while a woman is pregnant or any death of a woman within six months of delivery. This includes deaths resulting from abortions, ectopic pregnancies and all deaths during pregnancy, childbirth, puerperium or deaths from complications of childbirth."

The State Medical Society and the Division of Maternal and Child Health have participated in a cooperative program for the past two years in the review and study of every maternal death. The information gained from these studies is proving to be a definite factor in the improvement of obstetrical care. This information is being used widely by the profession and in teaching institutions. In order to improve this service, it is essential that such deaths be reported promptly. All information regarding them and the reports are held in strictest confidence.

To assist in this cooperative effort, the State Board of Health, at its meeting July 13, 1954, made it part of the rules and regulations of the State Department of Health that the attending physician report every maternal death within 48 hours directly to the Division of Maternal and Child Health. All hospitals have been supplied with confidential forms for such reports and may ask for more such forms as needed.

MORBIDITY REPORT

Disease	July 1954	June 1954	July 1953	Most cases reported from these counties
Actinomycosis	1	2	..	Cherokee
Diphtheria	1	0	0	Clarke
Scarlet Fever	15	125	10	Polk, Scott
Typhoid Fever	1	1	1	Cerro Gordo
Smallpox	0	0	0	.....
Measles	842	2,627	412	Buena Vista, Des Moines, Palo Alto, Scott
Whooping Cough	49	26	17	Des Moines, Guthrie, Scott
Brucellosis	30	23	45	Washington 3, others 1 or 2 to a county
Chickenpox ...	113	413	116	Boone, Dubuque, Palo Alto, Scott
Meningococcus Meningitis ..	3	7	1	Des Moines 2, Pottawattamie 1
Mumps	236	980	198	Des Moines, Linn, Scott
Poliomyelitis ..	223	26	59	Linn, Marion, Polk, Pottawattamie 63 para., 106 non-para., 54 unspecified
Psittacosis	1	7	3	Henry
Infectious Hepatitis	296	325	112	Calhoun, Cerro Gordo, Emmet, Sac
Rabies in Animals ..	19	35	12	Mitchell 2, Woodbury 3, others 1 to a county
Tuberculosis ..	60	46	55	For the state
Syphilis	139	104	162	For the state
Gonorrhea	89	47	53	For the state

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Publications Chairman*, Dexter, Iowa

President—MRS. LESTER R. HEGG, Rock Valley

President-Elect—MRS. CHARLES H. FLYNN, 709 W. 15th Street, Clarinda

Secretary—MRS. ROBERT P. MASON, 5818 Chamberlain Drive, Des Moines 12

Treasurer—MRS. HOWARD H. SMEAD, 3333 Grand Avenue, Des Moines 12

OFFICERS OF THE WOMAN'S AUXILIARY TO THE IOWA STATE MEDICAL SOCIETY 1954-1955

President—MRS. L. R. Hegg, 2045 East 15th Street, Rock Valley

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First Vice-President—MRS. D. H. King, 301 East Fourth Street, Spencer

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ADVISORS

L. A. Coffin, M.D., Farmington

Otis D. Wolfe, M.D., Marshalltown

Wendell L. Downing, M.D., Le Mars

COUNCILORS

First District—MRS. D. C. Sharpe, 155 South Grandview, Dubuque

Second District—MRS. S. S. Westly, Manly

Third District—MRS. F. D. Edington, 313 West Second Street, Spencer

Fourth District—MRS. J. M. Krigsten, 3020 Pierce Street, Sioux City

Fifth District—MRS. A. E. Acher, 919 Northwood Avenue, Fort Dodge

Sixth District—MRS. R. S. Gerard, 173 Graceline Boulevard, Waterloo

Seventh District—MRS. E. A. Larsen, 323 East Oak Street, Centerville

Eighth District—MRS. C. J. Lohmann, 700 Oak Street, Burlington

Ninth District—MRS. H. A. Spilman, 1231 Castle Street, Ottumwa and Mrs. E. B. Howell, 238 West Golf Avenue, Ottumwa

Tenth District—MRS. H. J. Peggs, 1001 West Adams Street, Creston

Eleventh District—MRS. E. C. Petersen, 1300 Chestnut Street, Atlantic

STANDING COMMITTEES

Achievement Awards—MRS. V. W. Petersen, 1324 Pershing Boulevard, Clinton; Mrs. M. Blackstone, 12-38th Street, Sioux City

American Medical Education Foundation—MRS. H. A. Spilman, 1231 Castle Street, Ottumwa

Annual Meeting—MRS. B. F. Kilgore, 5434 Woodland Avenue, Des Moines

Archives—MRS. Fred Moore, 634-40th Street, Des Moines

Bulletin—MRS. F. B. Leffert, 614 Park Avenue, Centerville

Civil Defense—MRS. M. Beddoes, 245 Alta Vista, Waterloo

Finance—MRS. Wm. B. Chase, Jr., 690-63rd Street, Des Moines

Handicapped—*Chairman*, Mrs. H. C. Merillat, 2801 Woodland Avenue, Des Moines; Mrs. J. F. Gerken, 811 Fletcher Avenue, Waterloo; Mrs. J. F. Sulzbach, Cascade Terrace, Burlington; Mrs. J. W. Lawrence, Dubuque; Mrs. C. E. Heffernan, 3850 Country Club Boulevard, Sioux City; Mrs. A. E. Acher, 919 Northwood Avenue, Fort Dodge

Historian—MRS. A. J. Felter, Van Meter

Legislation—*Chairman*, Mrs. H. W. Smith, Woodward; Mrs. E. B. Dawson, 227 South Twelfth Street, Fort Dodge; Mrs. F. M. Rizzo, Sibley; Mrs. G. H. Watters, 743-53rd Street, Des Moines; Mrs. E. E. Munger, 110 East Third Street, Spencer

Mental Health—*Chairman*, Mrs. J. F. Gerken, 811 Fletcher Avenue, Waterloo; Mrs. T. E. Davidson, 908 Second Street, Mason City

Nurse Recruitment and Loan Fund—*Chairman*, Mrs. E. A. Larsen, 323 Oak Street, Centerville; Mrs. H. W. Longworth, 628 South Boone Street, Boone; Mrs. L. E. Pierson, 3064 Valley Drive, Sioux City; Mrs. B. E. Howar, 1428 Des Moines Street, Webster City; Mrs. O. A. Elliott, 4010 Welker Avenue, Des Moines

Parliamentarian—MRS. J. A. Downing, 1246-46th Street, Des Moines

Press and Publicity—MRS. H. E. Wichern, 3711 Forest Avenue, Des Moines

Program—*Chairman*, Mrs. J. F. Gerken, 811 Fletcher Avenue, Waterloo; Mrs. L. K. Shepherd, 1723-48th Street, Des Moines; Mrs. George Hearst, 1222 West Second Street, Cedar Falls; Mrs. A. O. Wirsig, 704 West Street, Shenandoah; Mrs. W. K. Hicks, 610-39th Street, Sioux City

Publications—MRS. K. M. Chapler, Dexter

Public Relations—*Chairman*, Mrs. J. H. Matheson, 4321 California Drive, Des Moines; Mrs. G. D. Bullock, Inwood

Revisions—*Chairman*, Mrs. W. A. Seidler, Jamaica; Mrs. W. A. Hornaday, 612-44th Street, Des Moines; Mrs. E. T. Warren, Stuart; Mrs. J. A. Downing, 1246-46th Street, Des Moines

Safety—MRS. A. O. Wirsig, 704 West Street, Shenandoah

TODAY'S HEALTH—*Chairman*, Mrs. R. H. Moe, Griswold; Mrs. G. F. Keohen, 1200 Main Street, Dubuque; Mrs. H. E. Sauer, 412 Hughes Street, Marshalltown; Mrs. C. A. Trueblood, 906 North "C" Street, Indianola; Mrs. R. L. Olson, Northwood; Mrs. R. N. Larimer, 610-39th Street, Sioux City

Year Book—*Chairman*, Mrs. E. B. Hoeven, 224 East Alta Vista, Ottumwa; Mrs. B. F. Kilgore, 5434 Woodland Avenue, Des Moines; Mrs. E. A. Vorisek, 6205 Woodland Avenue, Des Moines

LINES FROM THE PRESIDENT

It does not seem possible that summer and vacations are over. Our inspiring National meeting held in San Francisco with scientific and commercial exhibits and several thousand in attendance is now a part of medical history. Aside from the constructive sessions of the Auxiliary, I believe that my most valuable experience was viewing the Seventeenth A.P.A.A. Art Exhibit. An exhibit of this kind is a positive example of how busy doctors are giving incalculable aid to cultural growth in their communities. It is a responsibility of Auxiliaries to help maintain and to support these enterprises. It is even better to be one who creates. Fine arts afford an outlet for the individual burdened with fatigue, anxiety, and routine responsibilities. May I recommend, as I did in my acceptance speech at the Annual Meeting in Des Moines, that we divide our program so that part of our energies can be devoted to cultural growth for our communities and for ourselves? Iowa cultural activities must continue to grow, and we can help them develop.

The State Board meeting held July 14 at the Hotel Commodore, in Des Moines, was a most enthusiastic one. Officers and Chairmen of State Committees presented plans for the year, and many of these Board members will attend fall conferences in the eleven conference districts. When you receive an invitation to attend an area meeting, please try to go, whether your dues are paid or not.

There will be achievement awards this year. Plan a unique program of Auxiliary activity so that your group will be a credit to your community and to your state. Cooperate with our Publications and Publicity chairmen. Consult the Yearbook for information, for names of committee chairmen, addresses, etc.

Have you seen the Future Nurses Club pins? Mrs. Elmer E. Larsen, Centerville, Nurse Recruitment and Student Loan Fund Chairman, can be asked for information in this field, and she will furnish items from time to time in *THE WOMAN'S AUXILIARY NEWS*. Do support and maintain the Future Nurses Clubs. They are one of our finest projects. We need more nurses, and they need us!

Do you know about the national *TODAY'S HEALTH* contest? Write to your State Chairman, Mrs. Ralph Moe, Griswold, Iowa, for particulars. Attend the State Conference this fall and learn more about it. Increase our national rating by subscribing to the *BULLETIN*. For one dollar, Mrs. Frank Leffert, Centerville, *BULLETIN* Chairman, will take care of your subscription.

Do become familiar with the fine reports of last year's activities throughout the state by consulting the mimeographed edition of *ANNUAL REPORTS*. Your President will have a copy. Ideas and inspiration for future progress in your own Auxiliary can be obtained from the *REPORTS*. Review for a view of the future. We need each other for en-

couragement and correlation of activities. Some people are so afraid to act that they never begin to live. Through these reports we live!

Mrs. LESTER R. HEGG, *President*

SUMMER EXECUTIVE BOARD MEETING

The summer Executive Board Meeting of the Woman's Auxiliary to the Iowa State Medical Society was held at the Hotel Commodore, Des Moines, on July 14, 1954. The State President, Mrs. Lester R. Hegg, Rock Valley, called the meeting to order at 10:15 a.m.

Reports of the National meeting were given by Mrs. Hegg, Mrs. Edward B. Hoeven, Mrs. William Chase, Jr., and Mrs. R. F. Nielsen.

Mrs. Lonnie A. Coffin, Mrs. Howard W. Smith, and Mrs. Noble Irving, Jr., were elected to the Nominating Committee. Mrs. Coffin is Chairman. The two members to be appointed by the President will be chosen later.

Mrs. Hegg has added one new committee, the Achievement Award, with Mrs. Vernon W. Petersen, Clinton, as Chairman. Ideas are requested for an Achievement Award contest, and they may be sent to the Chairman of this Committee. One good suggestion that developed in the meeting was that an award might go to the first district which is completely organized.

Mrs. Elmer A. Larsen, Centerville, Nurse Recruitment and Student Loan Fund Chairman, announced that her Committee had approved two new loans for the fall term, and there are others in progress. The Board voted to invite representatives of the Future Nurses Clubs to the Annual Meeting again in 1955.

Drs. Lonnie A. Coffin, Otis D. Wolfe, and Wendell Downing were present briefly at the afternoon session in their capacity as Auxiliary Advisors. They offered to assist the Auxiliary to the best of their ability.

Mrs. James F. Gerken, Waterloo, State Program Chairman, recommended emphasis upon Mental Health, especially in county programs; and consideration should be given to legislation, Blue Cross-Blue Shield, a few programs on the fine arts, and some recreational activity.

A discussion regarding synchronized election of officers in county Auxiliaries so that both county and state work might be facilitated brought out some provocative thinking. The first of May was suggested as a good time for new executives to assume office for the sake of making current yearbooks accurate. A motion was passed to the effect that the Board recommend to all county Auxiliaries that the names of county officers be in the hands of the State President and State Secretary by the time of the Annual Meeting and that these officers perform their duties from date of the yearbook, September 1, until August 31 of the ensuing calendar year.

Mrs. Hegg presented the idea of choosing insig-

nia for the State Auxiliary and the choice of such insignia. Mrs. Lonnie A. Coffin was appointed to study the possibilities and to make recommendations.

The Board recommended that representatives throughout the state be appointed to the Annual Meeting Committees to assist the Chairman, Mrs. Benjamin F. Kilgore, Des Moines, and the Polk County Auxiliary for the preparation and presentation of the 1955 Annual Meeting.

MRS. KEITH M. CHAPLER, *Publications Chairman*

CONVENTION REPORT

Do you ever really think about the word *convention*? What does it mean? It has various meanings, but always it conveys the sense of its Latin original *conventio*, which means "to come together."

A total of ten million Americans attend national conventions each year. Why do they go? For pleasure? For conviviality? Yes. A few. But mostly they go to exchange ideas, to acquire information, to rekindle enthusiasm, to receive inspiration, or perhaps to inspire others. Down deep in the heart of the American people is an innate desire for knowledge which will help him or her to help others—to do better that which needs to be done. It is an essence of the tribal or community spirit which has remained pure as it filtered down through the ages to each succeeding generation; it is the intangible which the rest of the world cannot grasp or understand.

Total registration at the AMA Convention at San Francisco June 20-25 was 42,969; of this number 12,069 were physicians.

The above totals make the 1,579 (approx.) auxiliary members who registered seem puny by comparison. However, there were many things to see and do in San Francisco, and if the lure of a few care-free days proved irresistible to many auxiliary members it is not too surprising. They have earned a respite.

The reports of National Officers, Chairmen and State Presidents are proof of a successful year and a growing awareness of the responsibilities inherent in the words *doctor's wife*. These reports, which will be published in the *BULLETIN*, tell of the activities carried on by auxiliaries in all of the forty-eight states and in Alaska and Hawaii.

The Delegate from Hawaii presented leis to the National officers during the Luncheon honoring Past Presidents. This ceremony was a brief, pleasant interlude which may become a tradition.

Auxiliary headquarters was the Fairmont Hotel, where most of sessions were held—exceptions being the Round Table Discussions (*TODAY'S HEALTH*, Program, Mental Health, Public Relations, Legislation) which were held in the Golden

Empire-Bonanza Rooms at the Mark Hopkins Hotel. These were panel talks, with time for questions and discussion.

The doctor-speaker on Mental Health stressed the importance of good relations between mothers and children—especially small children. He pointed out that 19 million women are employed today, many of them having small children who are at an age and period of life when mental illness develops. "It is important that these children have love and security. It is vital that they suffer not too much personality damage," he declared.

One hundred thousand young people in the U.S. are suffering from schizophrenia, much of which could have been prevented. The speaker cited the fact that the Woman's Auxiliary to the AMA was the only organization which had yet undertaken the task of education to prevent mental illness.

Future Nurse Clubs zoomed last year, with a total of 504 Clubs organized—26,280 members.

Six hundred scholarships and loans were awarded totaling \$80,000. Since 1945 \$250,000 have been given for scholarship and loans to further the education of nurses.

Twice as many auxiliaries contributed to the AMEF this year as last, and ten states contributed more than one dollar per member. Indiana gave more than two dollars per member. Six states gave more than \$1,000.00. One parish in Louisiana (Rapides) gave \$15.00 per member. And the National Auxiliary gave a check for \$10,000.00 as usual.

MRS. EDW. B. HOEVEN, *Delegate*

MESSAGE FROM THE PROGRAM CHAIRMAN

I wish it were possible for me to know what each county organization needs in the way of a program. Most of you are small groups and get discouraged when one even mentions a ten point program or a twelve point program. Think only of what is best for you to do in your county.

The theme this year for our program is "The Doctor's Wife." We hope you will make special emphasis on the following:

1. Mental Health
 - a. Vocational rehabilitation
 - b. Care of the aged
2. Handicapped and Crippled

Why don't you start in September by having a potluck luncheon or supper and see if you can't get a hundred per cent membership and a hundred per cent *TODAY'S HEALTH* magazine subscription at this meeting? I think this would be a good way to start the year's work.

While you are together why not plan your Future Nurses Club and nurse recruitment program?

Your Program Committee will be glad to help you at any time.

MRS. J. F. GERKEN, *Program Chairman*

FALL BOARD MEETING

The Fall Board Meeting will be held September 27-28, at the State Society's office building, 529-36th Street, Des Moines.

Monday, September 27

6:30 p.m. Dutch Treat Dinner.
Roundtable following dinner.

Tuesday, September 28

10:00 a.m. Conference.
11:00 a.m. Business Session.
1:00 p.m. Luncheon.

YOU, YOUR AUXILIARY, AND TODAY'S HEALTH

SHOULD THE TODAY'S HEALTH CHAIRMAN BE—
Merely your Best Friend?—or the Best Worker in your Auxiliary?

The member with no initiative? or the member with the best ideas?

The member with family and personal obligations galore? or the member who can devote some time to the project?

The member who takes the job as a challenge? or the member who takes the job for the title and privilege of being on the Board?

The member who does things on time? or the member who seems never to get around to it?

NOTHING WORTHWHILE WAS EVER ACCOMPLISHED WITHOUT A LITTLE WORK!

Wouldn't you like your Auxiliary to rank at or close to the top in the TODAY'S HEALTH Exclusive and More Exclusive Clubs contest? The following county Auxiliaries were leaders in 1954:

Cass County, Mrs. Llewelyn L. Long, Atlantic, Chairman.

Clay County, Mrs. Frank D. Edington, Spencer, Chairman.

Dallas-Guthrie Counties, Mrs. A. M. Cochrane, Perry, Chairman.

Delaware County, Mrs. Paul G. Meyer, Manchester, Chairman.

Dubuque County, Mrs. Gerard F. Keohen, Dubuque, Chairman.

Sioux County, Mrs. Carl D. Oelrich, Sioux Center, Chairman.

Wapello County, Mrs. Philip D. McIntosh, Ottumwa, Chairman.

OPERATION CHRISTMAS is the title for the Christmas Gift Subscription program. "A TODAY'S HEALTH Gift Subscription from every Auxiliary Member" is the slogan.

Start planning now so that you and your Auxiliary may reach this goal. Special gift order forms are being prepared as well as a special gift announcement card which will be mailed in time to announce each gift for Christmas.

Only subscriptions sold to Auxiliary members, Physicians, and Dentists can be sold at the 50 per cent rates. Because of the postal regulations

under which the magazine is mailed, and contract agreements with magazine agencies and advertisers, subscriptions sold to any LAY PERSON or SCHOOL must be sold AT THE REGULAR FULL SUBSCRIPTION PRICE.

The 50 per cent commission, or portion of the regular subscription rate, retained by the Auxiliary can be used as you wish (in the form of gift subscriptions, for your A.M.E.F. fund, purchase of needed items for your school or hospital, etc.), but the actual subscription transaction with laity or school must be based on REGULAR subscription rates.

BURLINGTON CRAFT SALE SUCCESSFUL

The first Craft and Hobby Sale for southeast Iowa was held early in April at the Block and Kuhl Department Store in Burlington.

Total sales of items made by handicapped individuals amounted to over four hundred dollars.

Mrs. Donald Winter, Chairman of the Des Moines County Medical Auxiliary, was assisted in arranging for and conducting the sale by Mrs. W. E. Bentler, Mrs. H. B. Eastburn, Mrs. John Foss, Mrs. Walter Friday, Mrs. John Sulzbach, and Mrs. J. L. Saar.

The Burlington sale brings the sales locations for these special projects to six throughout the state.

SPEAKERS' BUREAU SCHEDULES

RADIO

WOI—Ames, Iowa

Thursday at 11:15 a.m.

"MUSIC WITH YOUR MEALS"

September 2 Foods We Eat—

And Where They Come From

September 9 Shopping for Food

September 16 The Champion Breakfast

September 23 The Luncheon Period

September 30 The School Lunch

WSUI—Iowa City, Iowa

Tuesday at 11:45 a.m.

"TRAIN UP A CHILD"

September 7 You're Having a Baby

September 14 Keeping Your Baby Well

September 21 Growth and Development

September 28 The Child and His Brothers and Sisters

TELEVISION

WOI-TV—Ames, Iowa

Friday at 9:30 p.m.

September 17 What the Doctor Does in a Physical Examination

September 24 What Is Appendicitis?

COUNTY SOCIETIES

DEATHS

Dr. Russell L. Mantz, 79, who practiced in Cedar Rapids for 52 years, died on July 27 at Spencer, after being seriously ill for a month from a kidney ailment. He was a Life Member of the Iowa State Medical Society.

Dr. Harris C. Moore, 64, of Clearfield, died on July 21 at San Antonio, Texas, where he had gone for a rest.

Dr. Thomas D. Kas, 71, of Sutherland, died of cerebral hemorrhage at the Sioux Valley Hospital, in Cherokee, on July 19. He had practiced there for about 43 years, he had served on the State Board of Health, and he was a past-president of the Iowa State Medical Society.

Dr. J. Frank Aldrich, 81, who practiced for 50 years at Shenandoah, died on July 9 at Decatur, Illinois, where he had lived with his daughter since he retired, about two years ago. He was a Life Member of the Iowa State Medical Society.

Dr. Nicholas Walter Labaugh, 75, who practiced 47 years at Mystic, died there on July 9, following a long illness.

DOCTORS SHY AWAY FROM CIGARETTES

The theory that cigarette smoking causes throat cancer seems to be finding considerable acceptance among physicians, according to the results of a survey conducted by Drs. L. S. Snegireff and Olive M. Lombard among members of the Massachusetts Medical Society and reported by Dr. Walter C. Alvarez in his syndicated column for August 3 in the DES MOINES TRIBUNE.

Of the 4,104 physicians who answered their questionnaire, one-sixth said they had quit because of the adverse publicity. Another sixth said they never smoked. Twenty per cent said they had cut down on the amount of their smoking, but only 0.7 per cent had changed from cigarettes to pipes or cigars. There were 0.7 per cent who said they were considering quitting, and 3.3 per cent were using filter cigarettes.

Of the smokers, 55.5 per cent said they had accepted the idea that smoking accounts for cancer of the lung, and of the non-smokers, 62.9 per cent had accepted it.

WEBSTER COUNTY POSTGRADUATE COURSE

The first postgraduate course of the fall season will open at Fort Dodge on Wednesday evening, September 8. The Webster County Medical Society is sponsoring a bi-weekly course of five lectures, and all physicians in adjoining counties are urged to attend. Dinner will be served at six-thirty in the assembly room at the Warden Hotel, with the lecture following. There will be no lecture September 22 because that is the date of the annual meeting of the Iowa Academy of General Practice. The course features pertinent subjects with excellent speakers. A large attendance is expected.

September 8 Obstetrical Emergencies
Donald Vroman, M.D., Omaha

September 22 Open date—Annual meeting Iowa Academy of General Practice

October 6 Rheumatic Fever in Children—Panel
James W. Culbertson, M.D., Iowa City
John W. Eckstein, M.D., Iowa City
James E. Odell, M.D., Iowa City

October 20 Anesthesia Emergencies
Stuart C. Cullen, M.D., Iowa City

November 3 The Treatment of Pneumonia
Donald R. Nichols, M.D., Rochester

November 17 Fractures in Children
Robert M. Wray, M.D., Cedar Rapids

BORIC TALCS SAFE FOR BABIES

Dusting powders containing no more than 5 per cent boric acid are declared perfectly safe for use in caring for babies, Drs. Alfred J. Vignec and Rose Ellis declare in a paper published in the July, 1954, issue of the AMA AMERICAN JOURNAL OF DISEASES OF CHILDREN. Standard baby powders manufactured by ethical firms usually contain no more than that amount of the acid, they maintain, and the boric-acid constituent in fact counteracts the possibly irritating qualities of talc.

The deaths recently attributed to boric talcs are asserted to have been due to "accidental, ignorant and at times negligent handling" of solutions, ointments and powders containing high concentrations of boric acid. The greatest number of fatal cases have been from the accidental swallowing of boric acid by newborn infants.

To abandon use of baby powders because of such reports would be absurd, they conclude. If we eliminated everything containing boron or its compounds, we would have to stop eating lamb, fish, crabs, lobsters, chicken and eggs. Rather, the practical lesson to be learned from the furor of the past several months is that powdered boric acid should not be dispensed "over the counter" to the public, and boric-acid solutions should not be permitted where any possibility of human error in their administration exists.

COUNTY MEDICAL SOCIETY OFFICERS

COUNTY	PRESIDENT	SECRETARY	DEPUTY COUNCILOR
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Dramamine's® Effect in Vertigo

Dramamine has become accepted in the control of a variety of clinical conditions characterized by vertigo and is recognized as a standard for the management of motion sickness.

Vertigo, according to Swartout, is primarily due* to a disturbance of those organs of the body that are responsible for body balance. When the posture of the head is changed, the gelatinous substance in the semi-circular canals begins to flow. This flow initiates neural impulses which are transmitted to the vestibular nuclei. From this point impulses are sent to different parts of the body to cause the symptom complex of vertigo.

Some impulses reach the eye muscles and cause nystagmus; some reach the cerebellum and skeletal muscles and righting of the head results; others activate the emetic center to result in nausea, while still others reach the cerebrum making the person aware of his disturbed equilibrium. *Vertigo may be caused by a disease or abnormal stimuli of any of these tissues involved in the transmission of the vertigo impulse, including the cerebellum and the end organs.*

A possible explanation of Dramamine's action is that it depresses the overstimulated labyrinthine structure of the inner ear. Depression, therefore, takes place at the point at which these impulses, causing vertigo, nausea and similar disturbances, originate. Some investigators have suggested that Dramamine may have an additional sedative effect on the central nervous system.

Repeated clinical studies have established Dramamine as valuable in the control of the symptoms of Ménière's syndrome, the nausea and vomiting of pregnancy, radiation sickness, hypertension vertigo, the vertigo of fenestration procedures, labyrinthitis and vestibular dysfunction associated with antibiotic therapy, as well as in motion sickness.

Any of these conditions in which Dramamine is effective may be classed as "disease or abnormal stimuli"* of the tissues including the end organs (gastrointestinal tract, eyes) and their nerve pathways to the labyrinth.

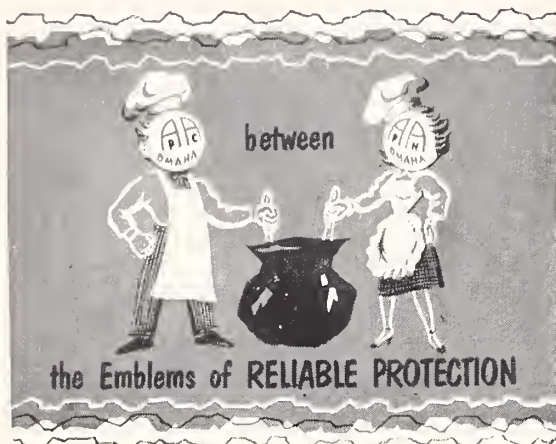
Dramamine (brand of dimenhydrinate) is supplied in tablets of 50 mg. and liquid (12.5 mg. in each 4 cc.). It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. G. D. Searle & Co., Research in the Service of Medicine.



The site of Dramamine's action is probably in the labyrinthine structure.

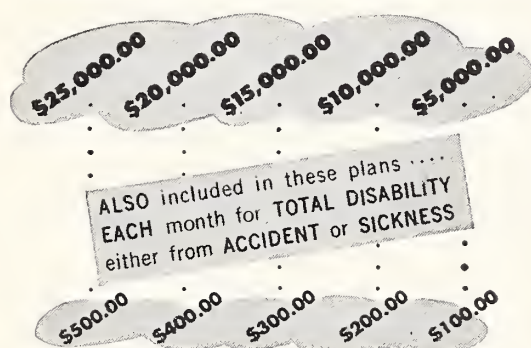
*Swartout, R., III, and Gunther, K.: "Dizziness:" Vertigo and Syncope, GP 8:35 (Nov.) 1953.

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The Month in Washington

Washington, D. C.—While Congress didn't enact all the health bills President Eisenhower's administration wanted to put through, it did mark up an imposing record of accomplishment. In fact it passed more health and medical legislation than any Congress in many, many years. The AMA actively supported most of the bills finally enacted, and opposed none of them.

Four important new laws were written into the statutes before the session ended—expansion of the Hill-Burton hospital construction programs, expansion of the vocational rehabilitation program, amendment of the income tax law to allow more liberal deductions for medical expenses, and transfer of the responsibility for health of the Indians to U. S. Public Health Service.

For years a group of state health officers have been working to bring about the transfer of Indian hospital and medical service from the Indian Bureau in the Department of the Interior to Public Health Service in what is now the Department of Health, Education, and Welfare. The health officers could show beyond any question that the Indians were receiving far less medical care than the rest of the population. They maintained that if the Public Health Service were made responsible for the Indians' health, there would be a rapid change for the better on the reservations.

What might be called governmental inertia succeeded in holding up the legislation for a time, but this Congress decided to make a shift. Public Health Service, which will take over on the reservations next July 1, already has plans under way to insure the Indians more and better medical care.

The demands for a more dynamic vocational rehabilitation program have been building up outside the federal government as well as in Washington. The problem facing this administration was to get more people rehabilitated, but at the same time to induce the states to take a more active part in the work. The law now enacted promises to do this. It authorizes gradual increases in the federal appropriations, but at the same time is aimed at bringing the states up to the position of full financial partners by the end of five years. The goal is to rehabilitate at least 200,000 persons annually, in place of the present 60,000.

If local communities are willing to raise from one-third to one-half of the cost, the new Hill-Burton program should result in the construction, within three years, of possibly a half billion dollars' worth of new facilities—rehabilitation centers, diagnostic-treatment clinics, chronic-disease hospitals, and nursing homes. (This program was discussed in detail last month in this column.)



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AND DRUG ADDICTION

In 1897 Doctor B. B. Ralph developed methods of treating alcohol and narcotic addiction that, by the standards of the time, were conspicuous for success.

Twenty-five years ago experience had bettered the methods. Today with the advantages of collateral medicine, treatment is markedly further improved.

The Ralph Sanitarium provides personalized care in a quiet, homelike atmosphere. Dietetics, hydrotherapy and massage speed physical and emotional re-education. Cooperation with referring physicians. Write or phone.

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32-102—Anti-Rho. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 2 cc.....Each 3.25	
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50-100—Physiological Salt Solution, 100 cc.Case of 100 35.00	
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The new construction will be in addition to the continuing Hill-Burton grants for complete hospitals.

On the medical-cost-deduction question, too, economists long have felt that families with unusually large medical expenses should be given more liberal tax deductions. The new law will allow them to deduct medical expenses in excess of three per cent of taxable income. Under the old law the figure was five per cent. A \$3,000-income family with \$150 in medical expenses under the old law could deduct nothing, but under the new law \$60. The Treasury estimates that the total saving to families will be \$30 million.

The general public probably read and heard more about the one bill that was defeated—reinsurance—than it did about all the health and medical legislation that passed. That defeat (in the House) was a surprise and a disappointment to the President. His advisors might have told him that all was not well, but obviously they did not. Opposition was not confined to the AMA. Also lined up against it were most of the health insurance companies, the U. S. Chamber of Commerce and a number of other professional groups. The labor unions would accept it, but wouldn't work to get it. Most significant of all, it had lukewarm support at best from the lawmakers who know most about it, the Senate and House committees that conducted the hearings.

OFFICE NURSES CRITICIZE BOSSES

Dr. Walter C. Alvarez, of the Mayo Clinic, reported July 28 in his syndicated column published in the DES MOINES TRIBUNE that the assistants of Cleveland, Ohio, physicians indicated in response to a questionnaire they felt their employers were overworking themselves and consequently were neglecting many things around the office that needed their personal attention.

Of the 214 office attendants who answered the questionnaire, 153 said the doctors' relations with patients were excellent, 37 said they were good, and only one said they were poor. Some 13 per cent said the relations would be much better if the doctor could manage to be more prompt.

The assistants said that what patients want most are more and better explanations about fees, about their illnesses, and about what happened in the hospital—what was found during the examination, what was found at operation, what was done, what was likely to be the outcome, and what the prescribed medicine was supposed to do.

But despite all the annoyances caused them by their overworked and often irresponsible chiefs, most said they still respected them greatly for their honesty, their ability to create confidence, their sincerity, sympathy, understanding and concern for the problems of their patients.

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DISTRYCIN

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Streptomycin and dihydrostreptomycin in equal parts

Distrycin has an important advantage over streptomycin. It has the same therapeutic effect but ototoxicity is greatly delayed. Since the patient is given only half as much of each form of streptomycin as he would have on a comparable regimen of either one prescribed separately, the danger of vestibular damage (from streptomycin) or cochlear damage (from dihydrostreptomycin) is significantly lessened.

Signs of vestibular damage appear in cats treated with Distrycin as much as 100 per cent later than in animals given the same amount of streptomycin.

On dosage of 1 Gm. per day for 120 days, ototoxicity was as follows*				
<p>Cat treated with streptomycin shows no nystagmus after whirling.</p> 	Streptomycin	12	6	18
	Dihydrostreptomycin	6	0	6
	Distrycin	0	0	0
<p>Cat given the same amount of Distrycin has normal reflex.</p> 	Streptomycin	0	0	0
	Dihydrostreptomycin	12	3	15
	Distrycin	0	0	0

*Heck, W.E.; Lynch, W.J., and Graves, H.L.: *Acta oto-laryng.* 43:416, 1953.

Distrycin dosage is the same as for streptomycin. In tuberculosis the routine dose is 1 Gm. twice weekly, in conjunction with daily para-aminosalicylic acid or Nydrazid (isoniazid). In the more serious forms of tuberculosis, Distrycin may be given daily, at least until the infection has been brought under control.

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is supplied in
1 and 5 Gm. vials,
expressed as base

PERSONALS

Steve A. O'Brien, M.D., has announced that **Harry W. Alcorn, M.D.**, is now associated with him in the practice of ophthalmology in Mason City.

Dr. A. W. Puntenney, a lieutenant in the Naval Reserve who has been stationed in Portsmouth, Virginia, has completed his term of military service and resumed his practice at Boone.

Dr. C. L. Heald, who has practiced at Sigourney since 1921, retired on August 9, the opening date for the Keokuk County Hospital, which replaces the private one that he has operated. Dr. Heald is credited with the idea of requiring the warning notice on laxative containers which discourages attempts at self-medication for abdominal pain and is said materially to have reduced mortality from appendicitis.

Dr. W. H. Ash, a graduate of the College of Medicine at S.U.I. who just finished his internship in Philadelphia, has replaced **Dr. Dean C. Snyder** in general practice at DeWitt. Dr. Snyder, who has been there since 1936, plans to retire temporarily for the purpose of regaining his health, but has announced no long-range plans.

Dr. Albert Ady, of West Liberty, suffered injuries to the fingers of his right hand in a power-saw accident on July 31 at his home.

On August 2, **Dr. David W. Wright** opened an office for the general practice of medicine at Decorah. He received his medical degree at Ohio State University in 1947, interned at St. Luke's Hospital, Denver, practiced four years in Benkelman, Nebr., and has just concluded a two-year tour of duty with the Navy.

Dr. Janis Straumanis, a D-P physician from Latvia who engaged in a supervised practice at the Glenwood State School, has recently been licensed and has located in Riverton.

Dr. J. E. Fitzpatrick, Jr., has closed his practice in Holstein and moved to Omaha, where he will be associated with Dr. John D. Hartigan.

The Jones County Medical Society gave a dinner at the Roosevelt Hotel, in Cedar Rapids, on July 22, in honor of **Dr. T. M. Redmond**, of Monticello. He was presented with a gold watch in commemoration of the fiftieth anniversary of his entry into the practice of medicine.

The McVay Memorial Hospital in Lake City has announced the addition to its staff of **Dr. Raymond A. Lynberg**, a native of Sioux City and graduate of the College of Medicine at S.U.I., who recently completed his internship at St. Luke's Hospital, in Spokane.

Dr. Max E. Olsen closed his practice in Minden on July 31, preparatory to undertaking duty with the Marine Corps. He holds the rank of lieutenant and reported to the Great Lakes Naval Training Station on August 16.

Dr. Leonard A. West, formerly of Des Moines, has retired from the Air Force with the rank of colonel, to become assistant medical director of Harbor General Hospital, at Torrance, Calif. Dr. West at one time was secretary of the Polk County Medical Society.

On July 15, **Dr. Clyde Smith** began general practice at Ringsted. A graduate of the Creighton University medical school, he has just completed his internship at St. Joseph Hospital, in Sioux City.

Two new physicians have begun practice at Osceola. **Dr. Rodger F. Eakins** who is associated with **Dr. H. E. Stroy**, is a graduate of the medical school at the University of Colorado and recently completed an internship and a residency at Mercy Hospital, in Saginaw, Michigan. At the conclusion of six years' service with the Air Corps, he held the rank of colonel and flight commander. **Dr. Edward Lauvstad**, who is associated with **Dr. C. R. Harken** and **Dr. George Armitage**, is a native of Corning and a graduate of the College of Medicine at S.U.I. He interned at St. Luke's Hospital, in Spokane, Washington.

On completion of his internship at Sioux City, **Dr. V. G. Helt** has begun general practice in Merville.

Dr. E. C. Wagner, of Plainfield, is constructing a new building in which he will have his office.

Dr. Edward Vosika, of Shelby, underwent an emergency operation for appendicitis in July, and while he was hospitalized **Dr. Paul Murphy**, who is doing postgraduate study in radiology in Omaha, took over his practice for him.

Dr. and Mrs. Glenn Skallerup, of Red Oak, whose marriage was announced in the August JOURNAL, were seriously injured in an automobile accident during their wedding trip and were taken to University Hospitals, Iowa City. Both of Dr. Skallerup's legs were broken, one of them in two places, and his wife's injuries, chiefly to the head, were even more serious.

The Greene County Hospital, at Jefferson, is to have the services of **Dr. David Stray**, an anesthesiologist. Dr. Stray was born in China and took his medical degree at Hopei Medical College. In this country, he has studied at Loretto Hospital, in Chicago, and Mercy Hospital, in Canton, Ohio. His experiences include medical-missionary work and services with the nationalist armies of Chiang Kai-shek.

Dr. Russell W. Conkling, who has been assistant chief of the surgical service at the VA Hospital in Iowa City and associate professor of surgery at S.U.I., has joined **Dr. L. D. Norris** in the private practice of his specialty at Newton. Dr. Conkling is a diplomate of the American Board of Surgery.

Dr. Peter C. Loewenberg, who has been on the staff of the Waterbury, Connecticut, hospital, and **Dr. Frank Lemanis**, recently of the Lincoln, Nebr., State Hospital, have begun work at the Mental Health Institute in Independence. They replace two staff physicians who recently left the Institute to complete further training.

Dr. Winston D. Minor has joined the staff of the McCrary-Rost Hospital, in Lake City, as a replacement for **Dr. Clare E. Knouf**, who is on active duty with the Navy. Dr. Minor is a medical graduate of S.U.I. and recently completed his internship at Detroit Receiving Hospital.

At Garner, **Dr. William A. Bockoven** is to be associated with **Dr. C. V. Hamilton**. Dr. Bockoven, whose late father practiced at Cresco, is a 1953 graduate of the College of Medicine at S.U.I. and interned at Harley Hospital, in Flint, Michigan.

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Dr. Bernard Silby has opened an EENT practice with **Dr. F. G. Carlson** at Mason City.

Dr. Kenneth Rodabaugh, a graduate of the medical school at the University of Nebraska who recently returned from service with the armed forces in Korea, has opened a practice in Sidney.

Following the completion of his internship at University Hospitals, Iowa City, **Dr. William Roundybush** has located in Muscatine. He replaces **Dr. D. C. Alftine**, who has accepted a residency in radiology at Iowa City.

Dr. Marvin H. Dubansky has opened an office for the practice of orthopedic surgery in Des Moines. Since his graduation from the College of Medicine at S.U.I. and a two-year internship at San Francisco, he has been in Navy service.

Dr. Hugh LaMaster has joined **Dr. E. B. Getty** in general practice at Primghar. He is a graduate of the College of Medicine at the University of Nebraska and interned at Clarkson Hospital, in Omaha.

Dr. Andrew D. Smith has left Mediapolis, after about two years of practice there, to join **Drs. J. P. Clark** and **George G. Johnson** at Estherville.

Dr. J. Stephen Westly resumed his practice of internal medicine in association with **Drs. L. W. Swanson** and **H. G. Marinos** at Mason City, late in July, following his completion of service with the Navy. Dr. Westly has been in uniform since April, 1953.

Dr. Glen Knosp joined the staff of the Perry Clinic on July 7. A graduate of the medical school at the University of Nebraska, he interned in Lincoln.

A surgeon, **Dr. H. Graham Parker**, has joined the staff of the Hampton Clinic. Dr. Parker is a graduate of the medical school at Washington University, St. Louis, and comes to Hampton after about five years of private practice at Platte City, Missouri.

Dr. Daniel J. Sullivan, a 1953 graduate of the medical school at Creighton University, joined the staff of the Buffalo Center Clinic on July 1. He interned at St. Joseph Mercy Hospital, Sioux City.

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At the end of June, **Dr. Roy E. Parry** closed his office after 35 years of practice in Scranton. He is in poor health.

After completing a three-year residency in obstetrics and gynecological surgery at the teaching hospitals of the Loyola University Medical School, in Chicago, **Dr. J. J. Sullivan** has returned to Clinton and is to be associated with **Dr. Charles Waggoner**.

Dr. Glen Kimball, a 1953 graduate of the College of Medicine at S.U.I. who just finished his internship at the Memorial Hospital in Manchester, Connecticut, is working with **Dr. William Kienzle** at Wellsburg. Dr. Kimball expects shortly to be called for military service.

Dr. Philip M. Englund has recently joined the staff of the Kersten Clinic, in Fort Dodge, in the practice of internal medicine. He recently completed a three-year residency in that specialty at Iowa City.

Dr. Ray B. Conner, who was trained in medicine at George Washington University, Washington, D. C., has joined the Kersten Clinic at Ft. Dodge as a general practitioner. He served his internship at University Hospitals, Iowa City.

Dr. Donald P. Reynolds has been appointed resident pathologist at St. Joseph Mercy Hospital, Ft. Dodge. Dr. Reynolds comes from Halifax, Nova Scotia, where he was associate provincial pathologist and lecturer in his specialty at Dalhousie University Medical School. His M.D. degree is from the University of Manitoba, and he has done postgraduate study at the Grey Nuns' Hospital in Regina, Saskatchewan, and at the University of Bristol, in England.

Dr. Francis M. Skopec has entered the practice of medicine with **Dr. A. E. Hale** in Mason City. Dr. Skopec received his M.D. degree at St. Louis University and interned and was a G-P resident for an additional year at St. Mary of Nazareth Hospital, in Chicago.

Dr. Ellis O. Schlichtemeier, who has practiced at Peterson for the past eight years, is henceforth to be associated with **Dr. Lyle Frink**, in Spencer.

Dr. Robert J. Foley has joined his father, **Dr. W. E. Foley, Sr.**, in medical practice at Davenport. The younger man received his degree in medicine at Loyola University, in Chicago, and served both

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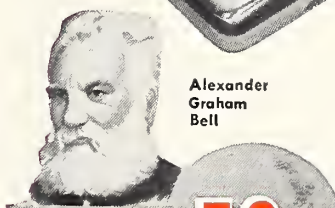
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an internship and a three-year residency in surgery at Milwaukee County Hospital, Milwaukee.

Dr. Lucy M. Radicia, a graduate of the medical school at Creighton University who interned at St. Mary's Hospital, Minneapolis, and served a residency at St. Joseph's Hospital and Children's Memorial Hospital, Omaha, has opened a pediatrics practice in Council Bluffs.

Dr. Marvin W. Burleson, of Ft. Dodge, has been elected a fellow of the Academy-International of Medicine and Surgery.

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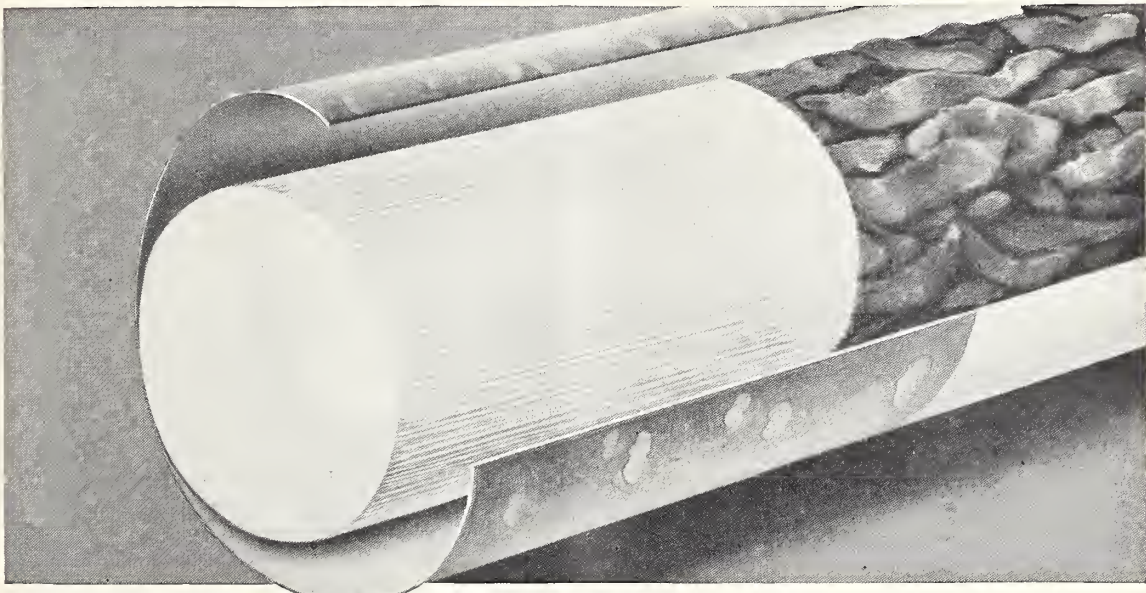
Ackerman, J. H., Clarksville
(Baltimore, Maryland), Sr. Asst. Surgeon, U.S.P.H.S.
Arnold, K. E., Sioux City
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Dooley, J. E., Fort Dodge
(Pleasanton, Calif.) Capt., U.S.A.F.
Dunseth, W. R., Kellogg
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(Portsmouth, Virginia) Lt., U.S.N.R.
Ehmke, Bruce C., Iowa City
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(San Francisco, Calif.) Lt. (j.g.), U.S.N.R.
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Smith, C. B., Iowa City
(Bowling Green, Ky.)Capt., A.U.S.
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Zoeckler, Samuel J., Des Moines
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POLIO INSTITUTE AT CREIGHTON

The Creighton University School of Medicine, along with the Nebraska State League of Nursing, will sponsor a two day Institute in Poliomyelitis and Rehabilitation to be held on September 2 and 3 at the Rehabilitation Center at Creighton Memorial St. Joseph's Hospital. This two day program will be open to doctors, nurses, physical therapists, occupational therapists and medical social workers in this area. Guest speakers will include David Dickinson, M.D., Associate Professor of Pediatrics, University of Michigan, Gordon M. Martin, M.D., Associate Professor of Physical Medicine and Rehabilitation, Mayo Clinic, and Miss Muriel Jennings, Consultant in Poliomyelitis and Orthopedics, the League of Nursing, New York City. Members of the faculty of the Creighton University School of Medicine will participate in the program, which will be concerned with the latest advances in poliomyelitis management on September 2, and with the entire field of rehabilitation on September 3.

Information concerning this Institute can be secured by writing Harold N. Neu, M.D., Medical Director, Poliomyelitis Rehabilitation Center, Creighton Memorial St. Joseph's Hospital.

SOCIAL SERVICES FOR UNMARRIED MOTHERS

Very shortly, probably during the first two weeks in September, the State Board of Social Welfare will mail to each Iowa physician a folder containing names, addresses and telephone numbers of the agencies throughout the state which undertake to help and advise unmarried mothers. Because the folder is of the same size and shape as those in which one ordinarily puts correspondence for indexing in a vertical file, it can be stored conveniently for reference when occasion requires. Approval of this material by the Committee on Medical Service of the Iowa State Medical Society was secured in advance of its being printed.

The JOURNAL

of the

Iowa State Medical Society

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Vol. XLIV

DES MOINES, IOWA, OCTOBER, 1954

No. 10

Advances in Treatment of Severe Hypertensive Disease*

A. C. CORCORAN, M.D.**

CLEVELAND, OHIO

TREATMENT OF hypertensive disease has varied with concepts of the disease and with the availability of drugs and procedures. First, little attention was paid to hypertension as such. MacKenzie's "Diseases of the Heart," 1916, dismisses the topic in four or five lines; indeed, Dr. W. L. Bierring† says that this great man considered it a disease which the Americans had overemphasized. Such therapy as was available was limited to the symptomatic care of complications.

Next, as the concept of essential hypertension became accepted, treatment was still rudimentary and limited largely to masterful expectancy, reassurance and sedation. The view widely prevailed that blood pressure rose as a compensation for defective circulation and that to lower it would endanger the life of the patient. In the face of a lack of means for lowering it, this was a comforting rationalization.

Finally, the development of experimental hypertensions in animals demonstrated that hypertension is a diagnostic problem. It also became evident that high blood pressure as such, when long sustained, is, in widely varying degrees, bad for the vessels, so that one aim of treatment is to restore blood pressure to approximately normal levels. Just as these concepts gained acceptance, new and highly vasoactive drugs came on the market, so now we must guard against over-treatment.

TYPES

Still, before attempting any therapy, we must

undertake both diagnosis and evaluation. Even before doing this, it is wise to consider when the diagnosis of hypertension should be made. Master's recent expansion of the range of normal pressures in people of older age groups removes from the category of "hypertensive" a large group whose seemingly abnormal pressures have often caused undue and needless concern.

Once it has been established that true hypertension is present, the issue is one of diagnosis. Before labeling it "essential," one should determine whether the hypertension may be secondary to some ascertainable and sometimes mediable cause. Classification is a help in this. The etiologies of hypertension are (1) renal, (2) endocrine, (3) neural and (4) cardiovascular, each of them having clinical and experimental hypertensive equivalents.

Among these types, the most significant are the renal, endocrine and cardiovascular. The renal hypertension which is most significant is that which follows in the wake of pyelonephritis. That pyelonephritis is a common and widely neglected disease is apparent from the fact that in one Danish series it occurred in 200 cases in 3,100 routine autopsies. In some people, young men especially, it causes a hypertension which is sometimes destructively malignant. Furthermore, it is a process which modern agents can do much to suppress and even to cure. As a result, most people who present a problem in hypertensive disease should have attention given to the possibility of pyelonephritis. One should study urine sediment, urine culture, and urography or even aortography.

Next in order is pheochromocytoma. It is important because it is curable and because diag-

* Presented at Second Institute on Cardiovascular Diseases, V. A. Hospital, Des Moines, January 29, 1954.

** Research Division, Cleveland Clinic, Cleveland, Ohio.

† Personal communication at St. Andrews, Scotland, July, 1922.

nostic tests, as with Regitine, serve as convenient screening procedures.

Under the cardiovascular aspect, two hypertension come to mind. One is coarctation of the aorta, and another, less clearly recognized, is arteriosclerotic hypertension. This latter is the systolic increase of arterial pressure common to older people whose aortas have begun to lose elasticity. Because the heart ejects blood into a chamber which is less distensible than it ought to be, hypertension varies with cardiac output and, as a result, responds miraculously to reassurance, sedation, rest in bed and the like. I suspect that this psychosomatic characteristic is the explanation for most of the exaggerated and disproved claims that have been made for such agents as garlic, watermelon seeds and mistletoe extract.

Thus, the diagnosis of essential hypertension is made by exclusion, and in following that procedure, one should remember Platt's suggestion that hypertension under age 35 and in the absence of a family history should be considered secondary until proved otherwise.

TREATMENT

Essential hypertension is almost certainly a complex of processes which have a common expression. But since, unfortunately, we do not know these mechanisms, we must proceed empirically and descriptively. The hypertension may be early, without vascular damage, or advanced, with damage from hypertensive vascular disease severely expressed in heart, kidneys or brain; the process may be mild and static, progressive and severe, or, in some people, rapidly malignant. The aims and methods of treatment differ in these various groups.

But any therapeutic program has one common denominator. This is the fact that patients with hypertension over-respond disadvantageously to most of the difficult life situations. They must, therefore, conscientiously apply the rules of practical mental and physical hygiene in their daily lives. In so doing, they are in need of the help and encouragement of their physician. Neither the patient nor the doctor will be so impressed with this simple, generalized prescription as either would be by a bottle of magic which was guaranteed to solve the situation. Still, there are well documented studies to demonstrate the effectiveness of this form of treatment—supplemented, as need arises, by mild sedation.

Actually, the need for active treatment arises only in patients whose disease is disabling, most often because of headaches or progressive vascular damage. In our present state of knowledge the "prophylactic" treatment of mild essential hypertension by means of vasoactive and potentially dangerous drugs or procedures is probably not justifiable.

Still, given the situation of a severe, disabling

and or progressive hypertension, there are available Diet, Drugs and Dissection.

Diet: Most patients are curious about diet in hypertension. The only diet which significantly influences the condition is one that is low in sodium. The sodium intake should be less than 0.2 grams daily, and the diet should be maintained at this level for a period of 6-8 weeks, until it can be decided whether or not the patient is one whose disease can be controlled by this means. The effect is demonstrable only in a minority (20 or 25 per cent) of patients. It is secured only with difficulty and with the firm cooperation of the patient and his family. Unsuspected sources of sodium turn up constantly, and, until the regime is well established, frequent checks of urinary sodium output are necessary controls in the procedure. Too often, the physician is reminded of the dictum that "All men are liars" and acquires the conviction that restriction of sodium intake exaggerates this failing of our imperfect natures. Fortunately, recipes and foods are now available which make the lot of the patient on such a diet better than it was a few years ago. At the onset at least, many find the rigidity of the rice diet a very practical, if not a palatable, way of achieving the necessary sodium restriction. However, the coincident restriction of calories and protein is not a necessary condition for a satisfactory therapeutic response in a "sodium-responder." It becomes advantageous only in the obese and the azotemic.

Much is being said these days about low-fat and low-cholesterol diets in arterial disease, since it is argued that excess fat and cholesterol predispose to atherosclerosis. The latter proposition can be accepted as true, at least in some people, and there is some basis for the belief that consistent over-nutrition is a factor in atherogenesis. However the evidence is incomplete, and, obesity apart, there seems little present justification for severe restriction of fat or cholesterol as such, except as the former contributes to caloric excess.

Drugs: The nitrite series require little mention. None of them is a practical hypotensive agent. Actually, there are few drugs available which, in themselves, have any possible value in this disease. These few are (1) thiocyanate, (2) hydralazine (Apresoline) and (3) hexamethonium. To these have been added a variety of agents derived from (4) *Rauwolfia serpentina*. These last have still to be evaluated, but the evidence suggests that they deserve a place in the list.

1. *Thiocyanate.* This agent is used especially in patients whose major symptom is headache. Some of these can be relieved rapidly by the intravenous injection of a gram of thiocyanate ion, and the relief can be maintained by oral dosage with such an amount as will maintain a serum SCN concentration at levels between 8 and 12 mg. per 100 cc. One major disadvantage is the need for control of serum SCN concentration, which, especially when there is renal damage,

may rise to toxic levels with unexpected rapidity. Other disadvantages are the languor which the agent induces in some, and the sensitivity reactions of a small minority. Still, it is a useful agent. In a few patients the maintenance of serum concentrations at levels of 3-6 mg. per 100 cc. by means of small doses of thiocyanate combined with small doses of bromide effects symptomatic relief with less danger of intoxication. But in the majority, the depressor effect is small, and the major effect seems to be sedative.

In this connection, it should be mentioned that a related drug, sodium nitroprusside, has been found of value in the relief of the emergent situation created by the onset of hypertensive encephalopathy. The drug is given intravenously in a dose of 1 to 10 *micrograms* per kg. per minute and is adjusted according to the response of pressure, which is immediate and gratifying in most cases. Arrangements should be made for frequent control of blood-pressure level and for the maintenance of the infusion for several hours at least.

2. *Hydralazine*. This agent, which now has been in use for about 3 years, effects a considerable decrease in arterial pressure in about half the patients treated. Unfortunately, it has its disadvantages too; these consist, first, in the fact that some toxic side effects frequently are associated with the early phases of treatment. Secondly, in a small proportion of patients treated with large doses for long periods, the drug elicits a syndrome which, in its rheumatic and febrile aspects, has some of the characteristics of systemic lupus erythematosus. Because of its disadvantages, hydralazine is used only in patients who need antipressor treatment, and in these the aim is to increase dosage stepwise to about 800 mg. daily and to maintain this for 6-8 weeks before one comes to a firm decision on the response to the drug. Naturally, should a response occur at lower dosage, no larger amount should be administered. In any case, the attempt should then be made to reduce the dosage to about 200 mg. daily for maintenance treatment and to accompany this by a careful supervision of the progress of the patient.

3. *Hexamethonium*. This drug also has roughly a 3-year background of American experience. It is used primarily in those patients whose rapidly advancing disease forbids a delay of weeks such as might be necessary if a diet or Apresoline were the only alternative means of treatment available.

Dosage is highly individual. Most patients become more or less tolerant as time goes on, and a few become disappointingly so. In general, treatment is begun in the hospital, and hospitalization is prolonged for such a time as may be necessary for the patient to acquire a full knowledge of the agent and how to handle it. It is very useful, but it is also dangerous, since the hypotension it elicits may be very profound. It is to be hoped that the chemists will contrive something a little better as time goes on.

Initially, parenteral administration is probably safest; later, oral treatment may be tried. In either case, training, experience and understanding on the part of the patient and physician alike are essential.

In this connection, a combination of hexamethonium and Apresoline has been recommended as a more generally effective means of controlling severe hypertensive disease than is either agent alone. In attempting this, it should be recognized that even if the advantages of both are secured, the disadvantages are also cumulative, and, besides, that many patients who respond to one of the two drugs do not necessarily respond to the other. Consequently, for the present at least, such combined treatment remains to be completely evaluated, and our own experience indicates that it probably is not generally advisable.

4. *Rauwolfia*. The active agents in the extracts of *Rauwolfia serpentina* are alkaloids, of which one, reserpin, has been isolated. The action is central and, in manner, tranquilizing rather than sedative. Some patients respond well to this agent; many more show no distinct effect. A considerable merit of the drug seems to be the absence of dangerous side-effects, although nasal and bronchial congestion are at times very distressing. Further studies may serve to indicate the exact application and limitations of this agent. In the meantime, it seems to be an interesting material which acts on the central nervous system in such a manner as to effect a sense of well being and ease, and a decrease of arterial as well as psychic tension in some patients.

Lastly, the veratrum series. It is not listed because the agents of this group have very little application. In our experience, the beneficial effects are very often complicated sooner or later by vomiting and collapse. It is doubtful that they act at all in anything but threshold doses, so that the variety of shot-gun mixtures of veratrum drugs with other agents have probably nothing to recommend them except their profit to the manufacturers.

Dissection: By dissection, I mean sympathectomy. It is undoubtedly a valuable procedure. Some few seem "cured," perhaps a half of those treated experience some relief for long periods, and a majority seem postoperatively less subject to the complications of hypertensive disease. Unfortunately, the criteria for selection are still ill defined. Possibly the best that can be said is that negative criteria are available, such as advanced age and cerebrovascular or advanced renal disability. Thus sympathectomy seems of most value in younger patients with severe disease, especially when the predominant expression is myocardial. Malignant hypertension of recent onset is widely accepted as an indication, and another may be a lack of intelligence or personal responsibility in the patient, so severe as to make him a poor candidate for the trials and tribulations of treat-

ment with hydralazine or hexamethonium. In the present state of knowledge, it is hard to know when to advise operation.

SUMMARY

The aim in this presentation has been to indicate the value of a diagnostic and descriptive approach to hypertension and the undesirability of over-

treatment with potentially dangerous drugs. Methods and procedures currently available can usefully prolong the lives of many people who suffer from severe hypertension. But the use of these techniques requires a considerable understanding on the part of patient and physician alike. This understanding, unfortunately, is inherent in the use of any highly active agent.

Experiences With Therapy for Arterial Hypertension At the Iowa City Veterans Administration Hospital*

WALTER M. KIRKENDALL, M.D.**

IOWA CITY

THE EXPERIENCES in the treatment of hypertensive disease at the Iowa City VA Hospital have been somewhat unique. In the two years that this hospital has been in operation, we have seen a highly selected group of patients. In the first place they are all men, and in the second place they represent, in general, two broad groups. The first group consists of men from the first World War who have an average age of about 60 years, and the second is a somewhat smaller group of men from World War II who have an average age of about 35 years. These two groups represent distinct and separate problems as far as their hypertension is concerned. In the younger group we see some of the earlier lesions of vascular hypertension, whereas in the older group we see the far-advanced complications. Indeed, the group with an average age of 60 is characterized by the presence of severe arteriosclerosis, nephrosclerosis, and organ failures such as congestive heart failure, kidney failure with uremia, and cardiovascular accidents. In general, a direct attack on the hypertensive state of these individuals is often inadvisable and unrewarding, except when it is of recent origin or when a malignant phase is present. We do make an effort to find associated disease and to categorize the hypertension as precisely as possible. In this age group occasionally one does find persons with pheochromocytoma, and indeed the one patient we have had in our hospital with this disease was 62 years of age. Sometimes we see a patient with pyelonephritis, but usually there is little we can do about this disease in older men. In general, we attempt to rehabilitate these persons and to teach them tasks or hobbies within

their limited capacities. We make an attempt to allay symptoms, but usually make only a token effort to lower the blood pressure.

This group constitutes most of the hypertensives we see. As a matter of fact, persons with mild or moderate hypertension and arteriosclerosis make up at least 20-30 per cent of the older age group of patients entering this hospital.

The younger group—the men who were in service during World War II or more recently—are somewhat less numerous, but we believe that they represent a group for whom we can do more. In general, the story is completely different, and we usually do not see a large number of complications of arterial hypertension. A very strenuous effort is made to find the cause of the hypertension and to classify it correctly. In this group we attempt to make a definitive diagnosis of such things as pyelonephritis. In those who have suggestive evidence from history or from urography, we take repeated urine cultures from both kidneys to establish the diagnosis. I think the point should be emphatically stressed that a single negative urine culture does not rule out the diagnosis of chronic pyelonephritis. In particular, we also search in this group for coarctation of the aorta, pheochromocytoma, unilateral kidney disease, and Cushing's syndrome, for we feel that all of these things are potentially remediable. It is also worthwhile from the standpoint of prognosis and treatment to rule out other causes of vascular hypertension. In this group we spend considerable time in doing such things as differential renal function studies by plasma clearance methods, in an effort to rule in or out the diagnosis of chronic nephritis and other known causes of diastolic hypertension.

Thus, we feel that in our particular situation, and especially in the latter group—the young

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** From the Medical Service, Veterans Administration Hospital, Iowa City, and the Department of Internal Medicine, College of Medicine, State University of Iowa.

men—we have a unique opportunity to make the most accurate diagnosis possible and, thus, to institute the most rational therapy available today.

Which hypertensive patient we should treat and when we should treat him are questions that have been of great concern to us. Recently three large studies^{1, 2, 3} have presented data which are in general agreement and which give us some idea of the course of the untreated disease. They show that hypertensive cardiovascular disease, considered generally, is indeed benign. It is to be noted, however, that no single person is really described by an average figure and that each needs careful individual attention over a considerable period of time.

Bechgaard's study shows that 71 per cent of patients with hypertensive cardiovascular disease survive at least 12-20 years after onset and that over one-half of the total remained in good health for that period. In other words, these patients were able to continue at productive employment or to lead reasonably normal lives. Only 25 per cent of the group remained symptom-free for this time. I should like to interject at this point that it is often difficult to correlate symptoms and disease, and this is particularly true as regards hypertensives, who, as a group, are afflicted with an unusually high incidence of iatrogenic symptoms. This point, then, is very difficult to interpret.

These generalizations were applied to all essential hypertensives. They are supported by reliable data, but since they leave out all consideration of age-sex factors, they are misleading, for the data clearly show that established essential hypertension is a serious disease in young people, especially young men, not so serious in middle-aged people of both sexes, and a mere annoyance in the elderly. More specifically, according to Bechgaard, a man who develops definite essential hypertension between the ages of 30 and 49 is eight times more likely to die within a 10-year period than is a comparable normotensive man over the same period of time. In contrast, women who develop the disease between 30 and 49 are only 1.4 times more likely to die during such a period than are comparable normotensive women. Men and women who develop the disease between the ages of 50 and 69 have an excellent chance of living out a normal life span, and attempts to treat the disease vigorously, except in unusual cases, are ill-advised.

Several other clinical observations supplement this evidence for us. First, we have found that at any time a rapid change in signs of the disease (i.e. from one Wagener-Keith fundus group to another), is ominous, and is often a forerunner of full-blown malignant hypertension. Second, malignant hypertension is invariably fatal in 8-12 months from onset. Third, severely arteriosclerotic patients seldom respond well to treatment, whatever their age.

In this era when we do not have a known,

specific treatment for hypertension, these observations help us in deciding two very important questions—what patients with hypertension should we treat? and how vigorously should it be done?

It is currently our policy to expend the greatest effort to lower blood pressure in the young hypertensive man, in the malignant hypertensive at any age, and in the grade III hypertensives below the age of 60. We also view with alarm and treat more vigorously the hypertensive below 60 who changes his classification under observation. Intermittent and remittent hypertension are not treated vigorously at any age, but are observed closely in the young—the theory being that the rewards are small, life span may not be increased by therapy, and the meticulous regimen necessary for complete control may be far worse than the disease. Persons in the middle years (45-60) with mild, sustained hypertension are managed in a similar fashion for much the same reasons. The old hypertensive, regardless of degree (short of malignant), is treated chiefly for symptomatic relief and as necessary for control of complications.

The extremely important fact that the progress of arteriosclerosis is accelerated by high blood pressure is not ignored in the above scheme. But with our present spotty knowledge of both diseases, it seems irrational to pay too much attention to mild blood-pressure elevations. Rather, correction of obesity and a reassuring attitude might be just as effective and are certainly more appreciated by the patient.

In the 35-year-old men with vascular hypertension we have a group who have a relatively poor life expectancy. In dealing with the mildly ill patients, we usually suggest that they restrict their salt, usually not their activities, and prescribe phenobarbital in small doses. In the future when we know more about the drug, *Rauwolfia serpentina* quite possibly may serve this purpose better. We carefully re-examine these men at 3-6 month intervals, paying particular attention to fundal vessels, the heart and the kidneys for progression of disease.

If the patients change classification or if they are in a Wagener-Keith group II initially, we believe that therapy should be more rigid, and surgery is considered. Despite the defects and the many shortcomings of surgery, there seems to be little doubt that adequate sympathectomy will lengthen the life span of persons in Wagener-Keith groups II, III, and IV. It is most likely that even in the absence of lowering of blood pressure, these people derive benefit, for, as Wilkins, Culbertson and Halperin⁴ have shown, sharp reflex overshoots of arterial pressure in this group can be abolished and the load on an already damaged vascular tree probably reduced.

Sympathectomy seems to increase the effectiveness of antihypertensive drugs when they are found necessary after surgery. Low sodium diets also seem more effective when used after sympathectomy. Since this hospital opened, we have

done seven sympathectomies on young men who had relatively severe disease and who had not done well on simple drug programs.

It is our notion that a combination of antihypertensive drugs is the most useful way of administering these agents today. It is becoming increasingly popular in medicine to attack responsive disease in a variety of ways at the same time. For instance, multiple drug therapy of tuberculosis is an established therapeutic measure. Likewise, drug therapy for cancer is sometimes more effective when the disease is attacked at two or more biochemical sites. In hypertension this seems to be an effective development. It is believed that the use of combinations of drugs delays the development of resistance to one or the other agent, enables the physician to utilize lower dosage scales, and at times ameliorates the uncomfortable or undesirable side effects of both or all drugs. Since the hypertension is usually attacked at two unrelated sites, it is not strange that the beneficial effects appear to be more than additive at times.

It is our feeling that all of these combinations work more effectively in the presence of a low-salt diet. One may enhance the low-salt diet by the use of resins, but we have not found this a practical method of controlling sodium chloride ingestion and do not use it now.

We have tried several combinations of drugs:

1. Hydralazine and Rauwolfia. The tachycardia of hydralazine is counteracted by the bradycardia seen with Rauwolfia as are some of the other undesirable effects of hydralazine.

2. Veratrum preparations and Rauwolfia.

3. Hydralazine and hexamethonium. Hexamethonium blocks the cardio-accelerator activities of hydralazine and also blocks many of hydralazine's other undesirable effects. Distinctly lower dosages of drugs may be utilized in a scheme with both of these agents.

4. Rauwolfia and adrenergic blocking agents. Rauwolfia tends to reduce the tachycardia seen with adrenergic blockers and, at times, seems to ameliorate some of the other undesirable side effects of these agents.

5. Three of the above, as, for example, hydralazine, Veratrum, and Rauwolfia.

We have no valid, long-term statistics on the relative efficacy of these programs in essential hypertension, although we are collecting data to this end. Of ten malignant hypertensives admitted to our hospital, three left the Service against medical advice and are dead. All of the remaining seven were treated primarily with hydralazine and hexamethonium combined with low sodium intake. Five of these are living and in fair health 6-18 months after discharge, and two have died of uremia. Although this is a fairly dismal record, it compares favorably with the results of any program available to the malignant hypertensive before the use of these antihypertensive drugs.

In our experience with this stage of the disease, hydralazine and hexamethonium simplify the management and have improved the results of therapy, although they leave much to be desired.

I should like to devote a paragraph to the direction which therapy will take in the future. When the cause of essential hypertension has been found, our path will be better directed. Until then, I doubt that we can refine the sympathetic blocking agents enough to do much better than the relatively poor job we are doing today. I believe this to be true for the following reasons:

1. Increased vascular tone is not solely due to increased sympathetic activity.

2. Blockade of sympathetic and parasympathetic systems must be general and invariably causes undesirable symptoms when relatively complete.

3. Adrenergic blockers seem usually to have an effect on the vomiting center which pharmacologists aren't hopeful of avoiding in future preparations.

Sympathectomy has been and is very valuable in controlling some but not all cases of hypertension. Other surgical approaches are not promising. Already, subtotal adrenalectomy has been extended to total adrenalectomy with sympathectomy, in order to improve upon the 20 per cent good results obtained.⁵ We see little success in the near future for ablation of the anterior pituitary by surgery or irradiation—an approach which, theoretically, might be a high-priced solution to the problem.

Rather, I suspect that we shall find greater success in the near future with agents against specific pressor (humoral) substances which may be present in the body in essential hypertension. Some of the benefit seen from hydralazine may have been due to this effect, for it blocks the pressor material derived from centripetal stimulation of vagus in dogs.⁶ Wakerlin's⁷ success with antirenin preparations in hypertensive dogs may be heralding another type of antipressor agent that may be found useful for man. The fact that preparations effective against dog renin are not beneficial in hypertensive man does not negate the possibilities of this approach in time to come.

Although we are far from satisfied with presently available methods for therapy of arterial hypertension, we likewise are far from pessimistic about the promise of future developments in this field.

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Peripheral Vascular Diseases*

CARL A. MOYER, M.D.**

AND

HARVEY R. BUTCHER, M.D.**

ST. LOUIS, MISSOURI

INsofar as the etiology of peripheral vascular diseases is concerned, nothing at present is really known excepting that the use of tobacco is related specifically to the development and progression of Buerger's disease. Pathologically, peripheral vascular diseases have been in general misnamed, for they are, with minor exceptions, generalized diseases of the vascular and collagenous systems.

BUERGER'S AND RAYNAUD'S DISEASES

Let us consider for a moment the general clinical aspects of Buerger's syndrome. In a small proportion of cases, the primary complaints are specifically related to retinal degeneration, with blindness; in a few, to a disturbance of function of the central nervous system—a degenerative psychosis; in a few others, to vascular disease involving the bowel; and in a few more, primarily to myocardial infarction. One might also consider, for a moment, the cause of death in people with Buerger's disease. There are, of course, first, complications attendant upon gangrene of the extremities, but more patients with this affliction die of a combination of myocardial infarction, renal insufficiency, occlusions of vessels to the gut and strokes, than die of gangrene of the extremities. Pathological examination of patients who have died of Buerger's disease commonly reveals the alterations characteristic of thromboangiitis obliterans involving both arteries and veins throughout their vascular systems. Buerger's disease should be looked upon as a generalized vascular disease, with the presenting symptoms and signs most often referred to the extremities—but in these instances still a generalized vascular affliction. Generally, it is obvious that arterio- and arteriolar sclerosis and syphilis are generalized vascular diseases, the former being primarily degenerative, and the latter inflammatory. With some stretch of the imagination, we might relegate Raynaud's disease, livido reticularis, erythromelalgia, acrocyanosis and faux panaris to a strictly limited peripheral-vascular-disease category.

The specific pathological changes associated

with arteriosclerosis, Buerger's disease, syphilis and Raynaud's syndrome are briefly as follows. Let us view the gross changes produced by arteriosclerosis involving the lower extremity: Figure 1 is a roentgenogram of a vascularly normal leg taken after amputation and the arterial tree injected with a radio-opaque medium. It can be seen that the major arterial trunks are smooth and full and that the secondary and tertiary branches are easily visible. This leg was amputated because of septic arthritis of the knee joint. In Figure 2, you will see a pathological obliteration



Figure 1

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** Department of Surgery, Washington University.



Figure 2

tion of the major arterial trunks. One may assume that the process in this patient was a slow one, since the injection has readily outlined a myriad of fine collateral vessels. In this patient, it would appear that the obliterative disease developed over a sufficiently long period of time to allow for the formation of good collateral circulation. On the other hand, if the atheromatous process involves not only the major arterial tree but also the arteriolar divisions, there is a failure of the function of both the major vessel and its secondary and tertiary branches, so that adequate collateral vessels fail to develop. An example of this process is seen in Figure 3. Here, neither major vessels nor collateral ones are visualized. This situation will be present in the extremity where the major vessels alone are involved but where the process of vascular occlusion is a rapid one. The histological aspect of atherosclerosis may be seen in Figure 4, a microscopic section of a large vessel.

Here intimal destruction has taken place, followed by secondary thrombosis of the artery and recanalization. Intimal thickening and breakdown is the primary pathologic process occurring in atherosclerotic vascular disease. It is, of course, a diffuse process. The peripheral blood flow deficiency which may develop in extremities involved by atherosclerosis is related to the diffuse, patchy encroachment upon the lumina of the vessels by virtue of the intimal disease and the occurrence of superimposed thrombosis.

It is fairly obvious that we can hope for relatively little long-term therapeutic effectiveness until it is possible to control the basic metabolic derangements responsible for this disease. It is true, however, that a localized thrombosis of a major vessel may occasionally be removed with a remarkable although possibly only a temporary improvement in the blood flow to the extremity. Nevertheless, prolonged improvement following

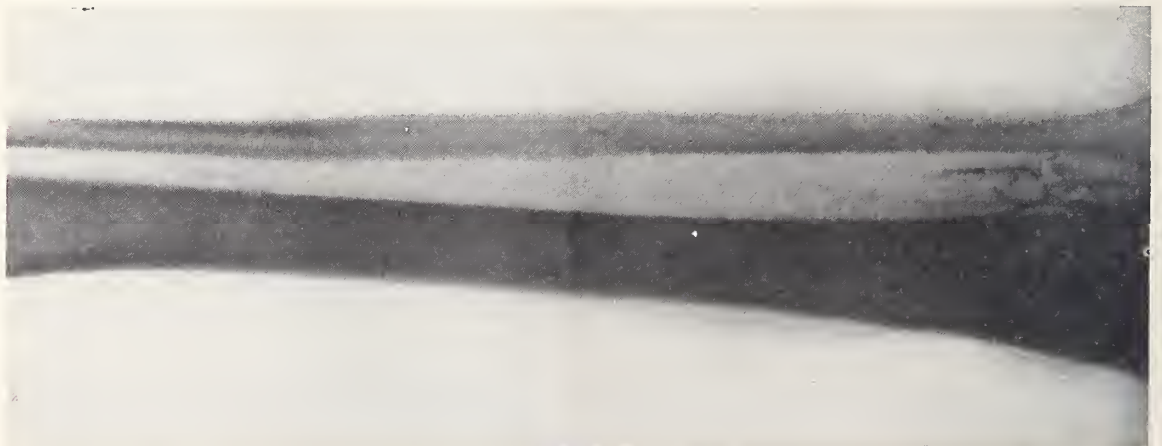


Figure 3

upon surgical procedures such as sympathectomy, endarterectomy and local resection of involved major vessels is to be expected only rarely. A special clinical type of arteriosclerosis—Monckeberg's medial sclerosis—does not produce deficiencies in peripheral arterial flow unless the stiff vessel breaks and produces an aneurysm or an acute local arterial thrombosis, or has associated with it atherosclerosis as the cause of peripheral-flow deficiency. Figure 5 shows extensive tubular calcification in the major arterial walls. X-ray examinations of an extremity which show this type of arterial calcification are not indicative of significant deficiency in arterial flow, but, on the contrary, may very well be indicative of an adequate flow to the extremity.

The pathological aspects of Buerger's disease, or thromboangiitis obliterans, are seen grossly in Figure 6. One sees segmental involvement of the larger and smaller arteries. It is diffuse and patchy. The process involves not only the arterial tree but also the venous one, which, of course, is not shown here. In the microscopic picture of thromboangiitis obliterans, Figure 7, the artery is situated on the left. There is an initial pan-arteritis and periarteritis which commonly causes thrombosis. Endothelial proliferation and periarterial fibrosis become prominent. The inflammatory process attacks the entire thickness of the vessel wall and perivascular tissues, and where nerves are in close proximity to the vascular tree, it involves the perineural stroma. This inflammation is seen about the small nerve situated between the artery and vein. In cases of long-standing involvement, vascular and perivascular fibrosis dominate. Calcification in the arterial wall does not occur. In the microscopic section shown here, thrombosis has occurred in the associated vein, the result of its involvement by the angitic process. The cellularity of the organizing fibrous tissue replacing the thrombosis in this vein is microscopically characteristic of thromboangiitis obliterans. As in arteriosclerosis, then, it is fairly obvious that after establishment of thromboangiitis obliterans, one can

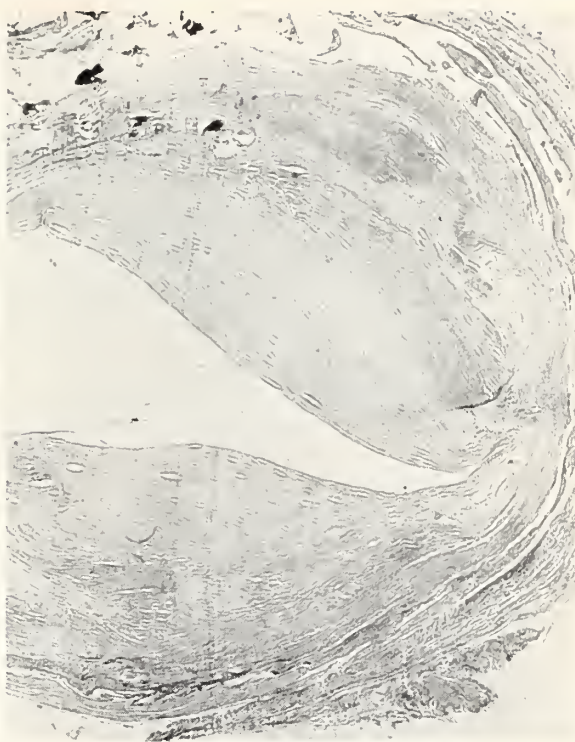


Figure 4

hope for little long-term improvement from sympathectomy as long as the patient continues to use tobacco. This conclusion is borne out by the experience of Silbert and many others, who have shown conclusively that if the use of tobacco is stopped, the disease does not progress; but, if its use is continued, even though sympathectomy is performed, the disease progresses eventually to gangrene.

In Raynaud's disease, there are no pathological findings other than an atrophy which may advance to gangrene, especially after trauma to the terminal phalanges of the fingers. Insofar as its association with scleroderma is concerned, little is



Figure 5



Figure 6

known. Some believe that scleroderma, as well as the occasional cicatricial stenosis of the esophagus associated with long-standing Raynaud's disease, may be an organic manifestation of a long-standing arterial-flow deficiency incident to vasospasm. This is theory only, and I do not present it as fact. There is hope that symptomatic control of Raynaud's disease may be effective in preventing the peripheral atrophy and gangrene. The modern vasodilators seem to be highly effective in control of the symptoms of this syndrome.

UNCOMMON ENTITIES

Some of the uncommon forms of clinical states usually considered in the peripheral vascular category are erythromelalgia, livido reticularis, acrocyanosis and faux panaris.

Primary erythromelalgia (Weir-Mitchell's syndrome) is a clinical entity about which relatively little is known. Typically, the patient presents with red hot, throbbing, painful toes or feet, which are relieved by cold. There is close association between episodes of pain and a rising cutaneous temperature in these patients. In the absence of evidence of occlusive vascular disease, the finding of peripheral pain brought on by heat and relieved with cold warrants this diagnosis. Nothing is known either of the cause or of the pathology of this rare condition.

Livido Reticularis is likewise a vascular disease entity about which little of etiologic or pathologic information is to be had. Purplish mottling of the skin of the extremities is characteristic in women (usually limited to the legs, and worsening during cold, windy weather). A minority of the cases reported have developed areas of cutaneous necrosis and ulceration in the lower extremities, but extensive vascular occlusion is rarely if at all associated with livido reticularis.

Acrocyanosis is the term applied to painless, persistently cold and cyanotic condition in the distal parts of the extremities, the cause of which is unknown. Clinically, it must be differentiated from Raynaud's disease. In acrocyanosis, there is

no blanching or severe pain, but only occasional puffiness and tenderness. Serious vascular complications do not occur, and nothing is known of its pathology.

Faux panaris or false felon is the term applied by Leriche to a "vasomotor" condition which involves the pads of the distal phalanges. It is often mistaken for a true felon and incised. When this error is made, gangrene of the distal phalanx commonly develops and requires amputation. The most important differentiating feature is the temperature difference between that of a true and false felon. The fingertip involved by faux panaris is swollen, red, very tender and throbbing, but is cold, whereas that involved by a true felon is hot, and may have associated with it leukocytosis, fever and occasionally lymphangitis and lymphadenitis. Nothing is known of the etiology or pathology of this condition. Leriche reports that sympathectomy gives permanent relief.

DIABETIC FOOT

I will now deal with a syndrome which cannot strictly be classified as a peripheral vascular disease, namely, the ills of the diabetic foot. The involvement of the arterial tree in patients with diabetes mellitus is similar pathologically to the involvement of the arterial tree in all patients

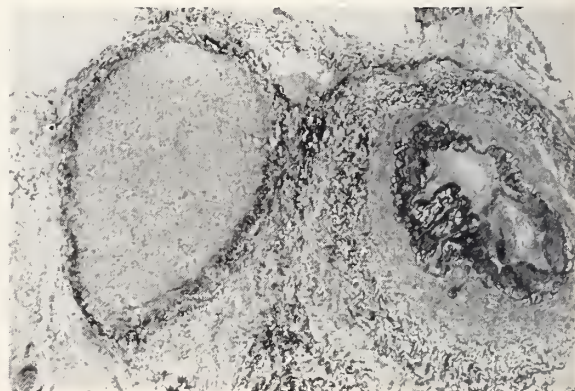


Figure 7

with peripheral atherosclerosis. However among the diabetics, the common occurrence of neuropathy with the loss of pain sensation to the skin of the foot and lower leg makes any reduction in peripheral blood flow far more serious than it would be in other patients. There are two reasons for this: (1) The diabetic, especially one whose metabolic disease is not well controlled, is more susceptible to infection. (2) The presence of hypesthesia or absence of pain and temperature-sense makes possible the easy development of blisters, etc., which act as sites for the easy entrance of infection. The presence of infection then, is an added factor in these patients, which, on occasion, in itself may result in the development of peripheral gangrene. Figure 8 shows a scar upon the sole of the foot resulting from the previous removal of a gangrenous toe and drainage of the deep plantar abscess that was responsible for the digital gangrene. It is evident that the foot healed well, despite the presence of gangrene. On the patient's right, now one year later, is seen what is often the train of events, in that infection has developed beneath a large plantar callus, and by extension from this, a deep plantar-space abscess with gangrene of the third toe has resulted. This occurred with no pain to the patient, since advanced diabetic neuropathy was present. The mechanism of the digital gangrene here involves thrombosis of the digital-end arteries by the plantar abscess. Since superimposed infection in such cases is an important factor in the production of gangrene, this type of patient is often a candidate for a conservative or limited amputation. Figure 9 shows the postoperative result of a transmetatarsal amputation of a diabetic foot, carried out for gangrene of two toes secondary to a deep plantar-space infection. Lumbar sympathectomy has been recommended in patients who are to be considered for conserv-



Figure 8



Figure 9

ative amputation, on the supposition that it will improve the peripheral blood flow to the extremity above the area of gangrene. In Figure 10 is shown a patient with diabetes mellitus and neuropathy who has been subjected to the starch- I_2 sweet test. This shows sweating present only in the areas of discoloration—in this case limited to the trunk. It is difficult to see how surgical sympathectomy by excision of nerve trunks which no longer conduct sympathetic motor impulses could improve upon the spontaneous sympathectomy induced by the disease.

Mal perforans in a diabetic patient develops in a poorly cared for diabetic foot in association with accompanying neuropathy (Figure 11). It is a chronic, painless ulcer which develops upon the plantar surface at the points constantly exposed to pressure—that is, over the heads of the metatarsals, most commonly the first and fifth. Initially, a callus becomes infected and centrally necrotic. As necrosis slowly progresses, a deep ulcer forms, with precipitous and undermining edges. Healing will occur with cessation of weight bearing. On return to activity, however, ulceration frequently returns. If neglected, infection eventually gains entrance to the underlying joint and also into the deep plantar space when the ulcers overlie the heads of the middle three metatarsals. Because of potential involvement of the deep plantar space, mal perforans of the middle portion of the metatarso-phalangeal region is of more serious import.

Certain clinical associations between these various types of peripheral vascular disease are of importance in diagnosis. Let us consider the differentiation of Buerger's disease from arteriosclerosis. In the first place, Buerger's disease is a generalized vascular disease afflicting veins as well as arteries. Its first manifestation in young people is very often a segmental, wandering peripheral venous thrombosis and is especially likely to occur after unusual exertion and exposure to cold such as swimming in north Iowa lakes. In the second place, few individuals who have advanced Buerger's disease are psychologically normal. They tend to be pathological liars,

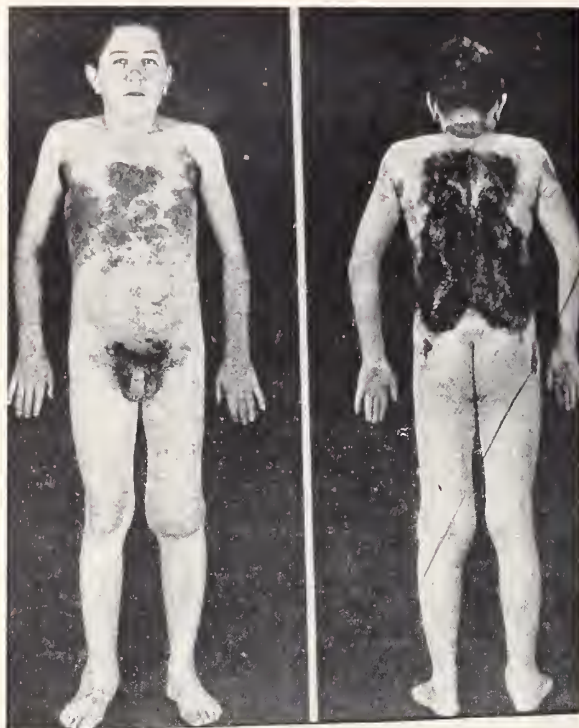


Figure 10

are generally completely uncooperative after they have come to know the doctor, and they are quarrelsome and occasionally abusive. In the third place, the first sign of intermittent claudication in these patients is often arch pain, and the individual seeks relief from the chiropodist or shoe fitter. Very often he is found wearing arch supports, even though a simple water-step test shows the arch to be normal. Clinical findings such as these tend to differentiate Buerger's disease from arteriosclerosis. Arteriosclerotic processes occur much more commonly in the older age group and in the diabetic. Although the clinical differentiation in these two forms of peripheral vascular disease may at times be difficult and even require a histologic differentiation, in most cases the diagnosis can be made clinically. In both groups, there are general manifestations of peripheral-flow deficiency. These manifestations are: (1) Delay in return of color to the skin or nail bed after the application of firm pressure. (2) Atrophy of the skin, with loss of hair and loss of nail growth. (3) Pigmentation induration and ulceration. These first three manifestations are primarily referable to the skin and immediately underlying subcutaneous tissue. The manifestations which indicate impaired peripheral blood flow to the muscle are: (1) Atrophy of the muscle. (2) Pain on exercise. (3) Muscular weakness. The presence or absence of pulses per se often has little direct relation to the adequacy or inadequacy of the peripheral blood flow. How much pulse would you expect in a patient with the type

of vascular tree shown in Figure 3? Although the pulses were absent in this foot, the foot itself was alive and without remarkable peripheral-flow deficiency. Amputation was performed because of septicemia arising in a crushed toe in the days before antibiotics. We have also recently seen a patient who had two living legs with proven acute thrombosis of the distal aorta. Obviously, he had no pulses, but did have adequate collateral circulation to prevent gangrene and to allow him to continue his occupation as a bartender. A complete history and physical examination, employing one's hands and eyes, can go far in exact diagnosis without the use of elaborate machinery such as thermocouples, oscillometers, etc.

POST-PHLEBITIC SYNDROME

As the final topic for discussion, let us consider briefly the most common serious condition resulting from venous disease in the lower extremity, namely, what is called the post-phlebitic syndrome.

This syndrome in its fully developed state is characterized pathologically by (1) chronic brawny edema, (2) pigmentation and atrophy of the skin, (3) marked subcutaneous fibrosis, even occasionally to calcification, (4) ulceration and (5) secondary varicosities, all involving primarily the distal portion of the leg.

Etiologically, this condition is related to thrombosis of the deep venous channels of the leg. Nothing more specific can be said of its etiology, since proof is lacking. However, the etiologic sequence held most likely at present is as follows: (1) Deep venous thrombosis occurs followed by recanalization. Perivascular inflammation associated with the thrombosis produces fibrosis, and thus there is partial obstruction of the major lymphatic channels draining the extremity. This process results in chronic, recurrent peripheral edema which in turn causes subcutaneous fibrosis. Chronic recurrent streptococcic lymphangitis is probably also a factor in some cases in the production of impaired lymph drainage and subcutaneous fibrosis. It is the increasing fibrosis which



Figure 11

is felt to be directly responsible for gradual reduction in the cutaneous blood flow. It is this reduction in flow that results in the pigmentation, atrophy and ulceration.

In treatment, the importance of chronic edema and fibrosis in the production of the incapacitating ulcerations of the post-phlebotic leg has led us to stress (1) wide and total excision of the atrophic skin and underlying fibrous tissue down to normal structures, followed by immediate split-thickness graft, and (2) constant postoperative elastic support in an attempt to control any tendency toward edema.

The surgical handling of the truly chronic ulcer demands only that the ulcer and the underlying and surrounding fibrous tissue be excised and the defect immediately grafted; and, secondly, and most important, the patient must be kept in bed 14-20 days after grafting before any dependency of the extremity is allowed. Thirdly, walking, standing or sitting is permitted only with elastic support to the leg for at least one year, and finally, interference with veins other than large superficial varices is not necessary and may be distinctly harmful.

The Postphlebotic Syndrome*

JOHN ARMES GIUS, M.D.**

IOWA CITY

THROMBOPHLEBITIS AND ITS early and late sequelae have received much attention in recent years, and great progress has been made in the prevention, early recognition and treatment of the acute stage of this disease. Although the exact pathogenesis of spontaneous venous thrombosis is unknown, it is now well established that the process usually begins in the small veins of the calf muscles and extends into the large deep channels of the leg. Here the stage is set for embolism and the permanently swollen leg.

During the acute phase of thrombosis, there is venous hypertension and stasis, with serious alterations reflected locally in all fluid compartments. Filtration from the capillary loop is increased, absorption is decreased, excess tissue fluid accumulates and the lymphatic channels are overloaded. Vascular spasm and anoxia are superimposed. The net result of this profound disturbance in fluid circulation is edema.

Because, immediately following venous occlusion, the adaptive capacity of the system attempts to compensate for the disturbance in function, collateral and communicating channels shunt blood around the point of blockage. These channels are usually superficial, thin-walled, easily distensible and capable of reversal of flow. Valves, if present, are thus rendered functionless. Later, the vessels may become varicosed.

The adequacy of compensation, as it develops over a period of months or years, will determine the ultimate anatomic and functional recovery of the extremity. It is apparent that the more extensive the venous occlusion and the greater the degree of physiologic activity demanded of the

collaterals, the more likely this mechanism is to fail.

For this reason it is necessary that special attention be given to preventing failure, or securing and maintaining fluid compensation during the acute and subacute phases of the adaptive reaction. The measures which facilitate this are: elimination of the hydrostatic factor by elevation; aiding absorption of tissue fluid by compression; relieving vascular spasm and anoxia by sympathetic blockade; prevention of progressive thrombosis by administration of anticoagulant drugs. Only by such means can the late sequelae be minimized.

If chronic venous insufficiency persists, progressive deterioration and serious disability may be anticipated. This condition—which has been variously called the postphlebotic syndrome, the postthrombotic syndrome, the lower-leg syndrome and the second stage of thrombosis—is characterized by edema, induration, ulceration, varicosities, pigmentation, bursting pain and recurrent infections. Recent investigations have suggested that the essential pathophysiologic feature consists of recanalized deep veins, devoid of all functional valve mechanisms. Under these conditions there cannot be effective central movement of blood by muscular action, and the so-called "peripheral heart" fails. Thus, in the upright position the venous circulation of the extremity is constantly overloaded, and progressive tissue changes develop.

Venographic and venous pressure studies, as well as clinical observations, support this concept. When contrast media are injected into the common femoral vein in the upright position, the fluid normally will pass but a short distance distally before it is held by valves. When similarly injected into the femoral vein of a patient with

* Presented at Second Institute on Cardiovascular Diseases, V. A. Hospital, Des Moines, January 29, 1954.

** From the Department of Surgery, State University of Iowa School of Medicine.

the postphlebotic syndrome, it may flow to the knee or below before stopping. Bauer has described a condition he terms idiopathic dilatation, in which reflux also occurs.

The venous pressure at the foot in the standing position is equal to or slightly higher than the calculated hydrostatic pressure in both the normal and postphlebotic leg. When a normal individual walks, an abrupt fall in venous pressure occurs in his leg, but little change is noted in the leg of a postphlebotic patient.

It is a common clinical observation that healing of the postphlebotic ulcer follows elevation and elimination of the hydrostatic factor, whereas recurrence of the ulcer is expected when the upright position is resumed. It is probably significant that postphlebotic sequelae are minimal after superficial femoral vein ligation for thrombophlebitis. In a review of 100 cases, Szilagyi and Alsop noted only two with serious trouble. Their venographic studies demonstrated that ligation precipitates clotting distal to the ligature, and recanalization of this segment does not occur. This suggests that in the absence of recanalization of the femoral vein, venous stasis is not severe.

Equally important evidence regarding the adverse effects of recanalization relates to the favorable results achieved by interruption of the deep veins of the leg in the postphlebotic state. Buxton and others¹ applied femoral vein ligation to the postphlebotic syndrome. Later Linton and co-workers^{2,3} reported on superficial femoral ligation and stripping of the varicose saphenous veins. Bauer⁴ became convinced that popliteal-vein ligation gave better protection against back pressure. He claimed that adequate collateral channels are always present about the knee.

We have been interested in extending our knowledge of the pathogenesis of this disease and establishing, if possible, a rational basis for therapy. Our studies, though incomplete and as yet inconclusive, have indicated that there is great variation in the degree of impairment to blood flow. Many of the answers that we have sought have not become apparent; instead, other problems have been posed along the way. We believe our most significant finding has been that all attempts must be made to minimize the degree of venous decompensation in its earliest stages in order to prevent progressive disability in the later stages.

Venous pressure and x-ray studies have been especially revealing in the postphlebotic syndrome. Some of our patients who have unilateral involvement have provided us an excellent opportunity for controlled observations on the venous pressure and the demonstration of venous channels by x-ray means in both the normal and involved leg. Failure of venous pressure in the postphlebotic leg to fall during walking, we believe, is an indication of failure of the "peripheral venous pump." When pressure studies are

repeated following ligation of the deep venous system, marked decrease in venous pressure during walking has correlated with clinical improvement in some patients. As yet, however, there are insufficient data on this problem for us to say that such a correlation can be predicted preoperatively.

The site, or sites, and extent of venous obstruction and valvular incompetency can be best studied by radiographic means. A radio-opaque medium (Diodrast, 35 per cent) is injected into the superficial veins of the foot or ankle through the same polyethylene catheter which is used to determine the venous pressure. The degree of venous obstruction may be assessed by means of repeated x-ray exposures of the lower leg, the knee region and the thigh in various positions from the horizontal to 45° dependency. Application of pressure bandages to the leg at the time of x-ray study will tend to force the medium into the deep veins of the leg. If these are occluded, visualization of only the superficial veins will be accomplished. In some patients we have observed the veins of the calf muscle to be occluded; in others, occlusion exists in the popliteal and the deep veins of the thigh, with patency of the veins below this area. It has become apparent that the degree and extent of occlusion influences the extent of venous decompensation and that any routine form of treatment, such as ligation of the superficial femoral or popliteal vein, could not be expected favorably to influence all patients with postphlebotic changes. In those instances in which collateral superficial veins appear to be few and small, there is reason to be hesitant about ligating the main channels. When the superficial veins are large and multiple, danger is sometimes associated with interrupting or removing these obviously abnormal but perhaps important routes of blood-return from the leg.

Though a combination of erect venous pressure determinations and radiographic visualization of veins of the leg provide information of therapeutic and prognostic significance, they are somewhat difficult to perform and interpret. At the present time we regard these measures as investigative techniques, rather than routine clinical procedures. Although we have not observed complications from the injection of Diodrast, it is conceivable that when serious venous insufficiency exists, there is danger of thrombosis and further damage.

We have performed ligation of the superficial femoral vein in a number of patients who have been studied by the means described above, but there is no certainty that they have been substantially improved, and the followup is as yet too short to predict the ultimate result. In a few instances we have carried out ligation of the superficial femoral vein together with interruption or stripping of the varicosities of the saphenous system. Immediate improvement has been noted in about 50 per cent of these patients, but we have

not noted, nor have we expected, a complete reversal or cure of the postphlebotic condition in any of them.

Usually the patients with this syndrome who come to us have long-standing and advanced disease of the leg. The condition is often bilateral and associated with chronic edema, dermatitis, pigmentation, ulceration, infection, varicose veins and debility of varying degree. Those measures which have been advocated for the treatment of the swollen, ulcerated leg such as bedrest, elevation, local measures and antibiotic therapy may result in rapid regression of edema and healing of the ulcer. In some, however, healing may be delayed or incomplete, and in such cases we have preferred to perform radical excision of the involved tissue followed immediately by the application of a split-thickness graft. This procedure usually takes care of the local problem, but the physiologic disturbance that persists, namely, the unrelieved venous hypertension in the upright position, often leads to recurrent breakdown. External compressive measures, such as an elastic bandage or elastic stocking worn constantly when the patient is in the upright position, frequent elevation of the legs, exercise of the feet and legs when in the standing position and special attention to the care of the skin, must be emphasized as important adjuncts to treatment during his entire lifetime. In selected cases, ligation of the deep veins of the leg may be indicated. We should like to emphasize the necessity for individualization of each problem, for it is our conviction that there is no single or routine over-all method of treatment applicable to all cases. Certainly the last word has not been written on the problem of the postphlebotic leg.

SUMMARY AND CONCLUSIONS

1. Thrombophlebitis is followed by the postphlebotic syndrome when there is failure of the venous circulation adequately to compensate for deep venous obstruction.

2. The failure of the fluid circulation of the leg involves all compartments.

3. During the acute stage of thrombophlebitis, special effort should be directed toward minimizing fluid decompensation, preventing extension of the thrombotic process and assisting adaptation of the collateral channels.

4. When thrombosis is acute, venous hypertension and stasis, vascular spasm and anoxia favor progressive clotting. The more extensive the acute process, the more serious are the late sequelae.

5. There is reason to believe that both anticoagulant therapy and superficial femoral vein ligation aid the vascular adjustment and result in fewer late swollen legs than might otherwise be anticipated.

6. Surgical measures have no place in the treatment of the subacute stage of thrombosis. Injection, ligation or removal of superficial vari-

cities seriously impairs the adaptation of the venous system.

7. The postphlebotic state is characterized by edema, induration, dermatitis, pigmentation, varicosities and ulceration. It is initiated and perpetuated by venous stasis.

8. The valves of thrombosed veins are permanently destroyed. When the large channels are recanalized, no effective mechanism exists for central movement of blood in the upright position. The "peripheral heart" fails, and venous stasis results.

9. Measures which minimize stasis consist of elevation, compression, graded exercises and interruption of recanalized deep and varicose superficial veins. Healing of the ulcer may require wide surgical excision and skin grafting.

10. Evaluation of the basic pathophysiologic problem by means of venography and venous pressure determinations is recommended before application of operative measures to the postphlebotic extremity.

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RESIDENCY PROGRAMS CAN HARM MEDICINE

The extension of physicians' training through the establishment of residencies can work contrary to the public interest in two important ways. First, it will encourage specialists to locate in cities, where they can most quickly recover the money expended during their training, in which case the rural areas and small towns will be left more and more to the cults. Second, it will discourage many capable students from undertaking the study of medicine.

Dr. F. T. H'Doubler points out in the September issue of *MISSOURI MEDICINE** that training requirements including four years of college, four years of medical school, and from two to five years of hospital training, not only for specialty-board candidates but for prospective general practitioners, are likely to put the profession of medicine beyond the means of too many young men and women.

"Until this last year," he says, "a preponderance of our best ranking college students preferred medical careers. This is no longer true. The number of them preferring today to study medicine has hit a decline, the preference now being for engineering."

* p. 711.

Give the United Way!

Arterial Homografts*

RODMAN E. TABER, M.D.**

IOWA CITY

DURING THE TEN YEARS between 1940 and 1950, there has been a 36 per cent increase in the number of people over the age of 65 years. Accompanying this shift, there has been a nearly proportional increase in the so-called degenerative ailments, particularly arteriosclerotic cardiovascular disease. Occlusive vascular disease, such as the Leriche syndrome in which the lower abdominal aorta becomes obstructed, is noted more frequently as physicians become conscious of its existence and of its clinical picture. Also to be considered is the arteriosclerotic aneurysm of the lower abdominal aorta, which has a predilection for the region of aortic bifurcation and frequently extends proximally to the renal arterial origins and distally into the iliac vessels. Present-day refinements in angiography and, especially, aortography allow delineation of the lesion. Many patients with these types of arteriosclerotic processes will benefit from the transplantation of aortic homografts. These may be used to restore continuity when the aorta has become obstructed, and to replace a site of potential rupture when aneurysmal dilatation has occurred. The serious threat to life posed by an arteriosclerotic aneurysm is evident from statistical analyses showing that 33 per cent of patients with this disease die of it within one year of its recognition. Gangrene-threatened extremities may be saved from

amputation and lives may be prolonged where threatened by rupture of an aneurysm. The enthusiasm of surgeons interested in arterial transplantation is proportional to their dissatisfaction with the older technics such as electrothermic coagulation, ligation, aneurysmorrhaphy and cellophane wrapping.

Other uses for arterial homografts may be mentioned. These include replacement of damaged major vessels in cases of trauma and in the performance of radical cancer surgery, where the resectability of a lesion necessitates excision of a portion of a vital arterial pathway.

The advantages of stockpiling arterial tissue for military or civilian defense requirements are obvious.

Arterial-homograft storage is not a new idea, for it was employed successfully by a pioneering surgeon, Carrel, and a physiologist, Guthrie, at the turn of the century. Vaseline, mineral oil and formalin were used by these investigators. Guthrie, amazingly enough, succeeded in transplanting the head and limb from one dog to another, with survival for several hours. One of his early arterial homografts functioned for eleven years, the dog finally succumbing to senility.

Afterward, interest in tissue transplantation waned until 1946, when Dr. Charles Hufnagel, then working in Boston, began to work with cold-temperature preservation. Storage of vascular segments in a nutrient medium of homologous serum at 4° C., just above freezing, was and still is successfully practiced. With this method, how-

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** Department of Surgery, College of Medicine, State University of Iowa.



Fig. 1. Arteriosclerotic abdominal aneurysm in a 65-year-old male. The proximal aorta and two common iliac arteries are surrounded by slings in preparation for resection.



Fig. 2. A freeze-dried aortic homograft has been transplanted to fill the defect. The left common iliac artery has been anastomosed to the side of the graft.



Fig. 3. Freeze-dried aortic homografts stored at room temperature *in vacuo*.

ever, storage periods have been limited, and the waste involved in discarding unused tissue stimulated a search for new technics. Freezing and storage at near 0° C. met with difficulty because of the intra- and extra-cellular growth of ice crystals. Disruption of cellular and histologic architecture resulted. Storage at dry-ice temperatures, namely, -78° centigrade, is a partial solution to this problem, but it necessitates time-consuming and expensive dry-ice problems.

FREEZE-DRYING

Great interest was attracted in 1950 to experiments in the technic of freeze-drying vascular homografts. Experimental usage has well demonstrated it to be the preferred method of those tried to date. Freeze-drying is similar to the procedure known as lyophilization. The application of this process to plasma and the antibiotics is familiar. The technic was originally employed by the German zoologist Altman, in 1896, for the purpose of preserving tissue for microscopic examination. It involves evaporation of nearly all the fluid while the tissue remains frozen. The dehydrating process is carried out in a vacuum, with the temperature low enough to prevent autolysis or significant ice formation within the tissue. The grafts are then sealed in glass ampoules under vacuum. Storage for long periods of time and transportation at ambient temperatures are then possible, and when they are about to be used, the dried grafts can be rehydrated in an electrolyte solution and made to assume normal physical properties. It is with this technic that we are processing tissue in the Tissue Bank of the Department of Surgery of the State University of Iowa College of Medicine.

The freeze-dried arterial homograft has been given a thorough experimental trial. From the standpoint of transplant success, it has had a lower incidence of thrombosis and graft dehiscence than the fresh arterial homograft. Observation periods now extend to 3½ years, with no evidence to date of delayed-graft failure due to degenerative changes. A few human fresh arterial homografts have been in place five years, and a small

number of human freeze-dried arterial homografts are now in the second year.

The grafts are not viable tissue. A considerable amount of time and effort has been expended in attempts to determine the necessity of graft viability at the time of transplantation. The evidence is convincing that it need not be viable. In all probability the transplant acts as a physiologic prosthesis and is slowly replaced by ingrowth of host fibrous tissue. New endothelium creeps across the internal surface of the transplant. This process, it would seem, closely resembles the one which takes place following a bone homograft.

Since it appears that a practical method for processing and storing vascular transplants is now available, the obtaining of adequate amounts of satisfactory human donor tissue presents the next challenge. Present requirements may be enumerated as follows. The donor should have been under the age of 50 and should not have died of generalized inflammatory or neoplastic disease. A process of elimination, apparently, will leave accident victims as the principal donors. New methods of tissue sterilization will soon allow use of vessels from patients who died of infections. The body should be promptly refrigerated after death, if the securing of permission may take considerable time. At present, donor tissue at the New York Vessel Bank has been successfully used from bodies refrigerated 12 to 18 hours. Little opposition has been encountered from relatives of a prospective donor when they have been made to understand that such tissue may support or sustain life in others.

SUMMARY

A relatively new and undeveloped tool, arterial homografting, is now available to the surgeon. It will allow him to substitute new and constructive for old and destructive procedures in the treatment of major-vessel arteriosclerotic problems.

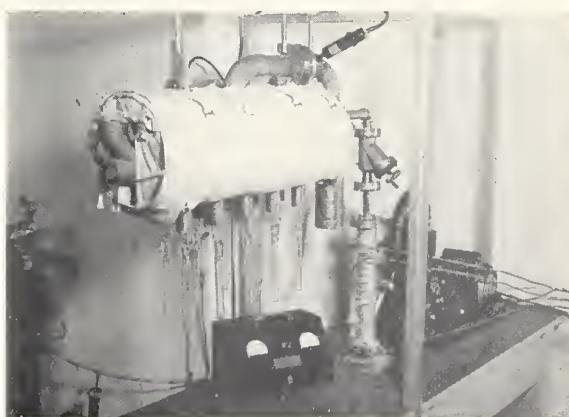


Fig. 4. The freeze-drying apparatus as developed in the S.U.I. College of Medicine Tissue Bank.

Clinicopathologic Conference

MERCY HOSPITAL

DES MOINES

March 2, 1954

CLINICAL HISTORY

MR. B. H., A WHITE MALE, age 64, was admitted November 2, 1953, at 4:00 p.m. Two days prior to admission, this patient developed acute generalized abdominal pain. Within twelve hours, the abdominal pain was associated with nausea and vomiting. There was no diarrhea. The family physician made the following observations: the patient appeared acutely ill with profuse sweating and a temperature of 103°. Generalized abdominal tenderness was present, with generalized muscle guarding of the abdomen. Urinalysis was essentially negative. The patient was given 400,000 units of penicillin and ½ Gm. of dihydrostreptomycin intramuscularly and was advised to return home for the night, but to notify his physician of any change in his symptoms. The next morning, abdominal pain was localized to the right lower quadrant and abdominal tenderness was limited to the right lower quadrant. Rebound tenderness was also present, and his temperature was 101°. Penicillin and dihydrostreptomycin were again administered. A diagnosis of appendicitis was considered, but the patient's age suggested otherwise. Conservative management was decided upon, and the patient was again advised to return home with instructions to notify the doctor of any change in his symptoms. Twelve hours later, his symptoms remaining unchanged, he was sent to the hospital with a tentative diagnosis of "acute appendicitis."

Review of Systems: E.E.N.T.: Essentially negative. Gastrointestinal: No previous episodes of abdominal pain. Cardiorespiratory: Essentially negative. Genitourinary: Nocturia once or twice nightly. Neuromuscular: Essentially negative.

Past Medical History: Usual childhood diseases. No operations.

Social History: The patient is a school-bus driver.

Physical Examination: On admission his blood pressure was 130/80; temperature, 98°; pulse, 80; respirations, 20. There was localized tenderness in the right lower quadrant. The remainder of the abdomen was soft and nontender. No masses were palpable, and the liver, spleen and kidneys were not palpable. The remainder of the physical examination was essentially negative.

Laboratory Studies on Admission: Hemoglobin, 11.2 Gm. or 72 per cent; red blood cells, 3,560,000; white blood cells, 15,100 with a differential of 75 per cent neutrophils, 23 per cent lymphocytes, 1 per cent eosinophils and 1 per cent monocytes.

Bleeding time, two minutes; coagulation time, four minutes. VDRL and Kline Flocculation tests, negative. Urinalysis: reaction, acid; color, straw; specific gravity, 1.018; albumin, trace; sugar, negative.

Clinical Course: On admission, the patient was placed on a soft diet and given 1.5 gr. nembutal. On the morning of November 3, he still complained of pain in the lower right quadrant and localized tenderness was still present. At 10:30 a.m., preoperative medication of morphine sulphate ¼ gr. and atropine 1/150 gr. was given, and an appendectomy was performed under a spinal anesthesia.

The operative note states, "The peritoneal cavity was opened through a right rectus incision. The cecum and appendix were delivered through the wound. The mesoappendix was clamped, ligated and cut. Because of the very long appendix and very long mesoappendix, multiple ligatures were used. All bleeding points were controlled. The appendix was then removed, by clamping and ligating. The stump was phenolized, alcoholized and inverted with purse string suture. The distal three feet of the ileum were examined for a Meckel's diverticulum and none was found. The gallbladder was distended, but there were no stones palpable. The large bowel was palpated, and diverticuli with concretions could be found in the sigmoid and the descending colon. The wound was closed with a double suture of 0 plain catgut on the peritoneum and on the rectus muscle. The aponeurosis of the rectus muscle was closed with 0 chromic catgut as interrupted vertical mattress sutures of dermal. The postoperative condition was excellent."

Postoperatively, the patient was given penicillin, 400,000 units, and ½ Gm. dihydrostreptomycin every eight hours. Dilaudid gr. 1/32 was given for pain. On his first postoperative day, his temperature was 101° and pulse 80. On the third postoperative day, he was given a soapsuds enema, and a large amount of soft, brown stool was obtained. On his fourth postoperative day, he complained of severe pain in the operative site. Penicillin and dihydrostreptomycin were continued. On the fourth postoperative day, because of nausea and inability to take fluids by mouth, balanced electrolyte solution was begun intravenously. On his sixth postoperative day, bloody discharge was issuing from the unhealed abdominal incision. The temperature was now 102.8°, and the pulse 100. The following day, the patient vomited approximately 150 cc. of dark

brown fluid. At this time, moderate distention of the abdomen was present. A blood count done at this time revealed total white blood cells, 15,050 with a differential of 95 per cent neutrophils, 4 per cent lymphocytes and 1 per cent monocytes. There was a left shift to the neutrophils. Balanced electrolyte solution intravenously was continued.

On the seventh postoperative day, his temperature was 104°. A consultant made the following note: "Temperature, 104° R., pale, sweating, ashen color, slightly icteric with icteric sclerae, listless but cooperative. Apical pulse very faint and rapid (160 per minute). Blood pressure unobtainable. Peripheral pulse questionably palpable. Abdomen is soft; no liver and spleen are palpable. Wound draining thick brown hemorrhagic fluid. Impression: Septicemia with adrenal failure. Recommendations: Adrenal cortex, intravenous blood transfusions, general shock therapy." Vomiting of cloudy, brownish-black fluid began, and a Levine tube was inserted. Urinalysis performed at this time revealed: reaction, acid; specific gravity, 1.018; albumin, 2 plus; sugar, negative; bile, positive and occasional finely granular casts. The temperature remained around 104° and the pulse between 100 and 120. Respirations were 32 per minute. Urine output was negligible. On the morning of November 11, the pulse became very weak and irregular, and the patient expired at 12:20 p.m.

DISCUSSION

Dr. F. C. Coleman: The discussion of the case tonight is by Dr. D. F. Crowley, Jr.

Dr. Crowley: This is the case of a 64-year-old man who was seen with generalized abdominal pain, generalized abdominal tenderness, generalized abdominal rigidity, and a relatively high fever of 103 degrees within a relatively short time (12 hours). There was no diarrhea, some nausea and vomiting and a negative urinalysis. Over the next 24 to 48 hours the man's pain, tenderness, and abdominal rigidity shifted to the right lower quadrant and he then had rebound tenderness in the right lower quadrant. He remained ill. He was placed in the hospital after about two days of conservative treatment at home, and after 12 to 16 hours in the hospital he was operated upon, the tentative diagnosis being acute appendicitis. His urinalysis in the hospital was negative, except that we have no report of a microscopic urine examination, but I am assuming that it was negative. That is the summary of this man's course until the time he entered the operating room.

I would like to review rather roughly, and possibly incompletely, the differential diagnoses of the acute abdomen occurring in man and briefly to point out just one or two factors about each of them that might or might not be applicable to the case under discussion.

The first differential diagnoses I have classified

as a miscellaneous group, which we can mention but briefly. The three principal retroperitoneal lesions are: acute kidney colic, acute pyelonephritis, and an expanding abdominal aortic aneurysm. Kidney colic has typically a "kidney type" of pain starting in the costovertebral angle and radiating into the groin or inguinal area, and is associated with chills and fever. There are urinary findings. None of these factors, by and large, apply to our case. The same is true for pyelonephritis. Acute pyelonephritis is associated with kidney pain, chills and fever, and urinary findings are present. The aortic aneurysm would be associated, I believe, with acute abdominal pain and probably an expansive and palpable mass.

Then I should mention the chest and heart lesions which must be considered in the diagnosis of an acute abdomen. There are three or four of these: pneumonia, pleurisy, possibly spontaneous pneumothorax, and certainly coronary occlusion. The important thing about these chest or heart conditions as they relate to our case is that although they might cause confusion at the very onset, by the end of two days the chest or heart lesion would direct attention to the chest or heart rather than to the abdomen.

Then there is the tabetic crisis, of which I have seen few cases; but I do not think there is any possibility of tabetic crisis here, for such cases give a history of past episodes of pain, and neurological changes suggesting *tabes dorsalis*.

Now we come to a rather broad group of abdominal disorders which I shall call inflammatory lesions. Actually some of them cannot be termed inflammations in the strict sense of the word, but we usually think of them as inflammatory lesions. The first of these is acute gastroenteritis. Could this be acute gastroenteritis? Gastroenteritis is typically characterized by nausea, persistent vomiting and persistent diarrhea. An acute gallbladder attack? Acute cholecystitis, with or without colic, is characterized by right upper quadrant pain radiating to the back. At the onset there might be generalized abdominal pain, depending upon the severity of the gallbladder attack. Certainly in the beginning there might be general abdominal pain, tenderness and rigidity, but after two or three days the gallbladder attack usually localizes itself to the gallbladder area, with tenderness, pain, and rigidity localized in the right upper quadrant, rather than in the right lower quadrant. There may be exceptions, but I am speaking more or less in generalities.

Acute pancreatitis has been said to be the most agonizing catastrophe that can happen in the abdomen, and is accompanied by the most profound shock. There are degrees of shock of course, and there are degrees of agony associated with acute pancreatitis. Of one thing I am sure, if a man has an acute pancreatitis, he will not allow his doctor to see him two to three times without receiving a hypodermic, for the pain will certainly be severe. Another thing in an acute pan-

creatitis is a typical localization of tenderness in the epigastrium—the so-called epigastric peritonitis. So I would rule out acute pancreatitis.

Regional enteritis may cause confusion in the diagnosis of an acute abdomen. There are acute and chronic forms of this disease. The acute form may be confusing, but the chronic type is typified by a history of recurrent bouts of pain, which we know that this man has never had. I would say, too, that regional enteritis in acute form in a man age 64 would be very unusual, though frankly, I should not rule it out on any other criteria.

Acute appendicitis—we shall come back to that later.

Diverticulitis—there is acute diverticulitis, and there is chronic diverticulitis. Diverticulosis, the presence of diverticula without inflammation, is relatively common in older people. Numerous reports have shown that 5 or 10 per cent of older people have diverticulosis, as demonstrated by barium enema. Diverticulitis, as well as diverticulosis, is most common, however, in the descending and sigmoid colon, with symptoms in the left side of the abdomen. There are cases, however, of diverticulosis and an acute diverticulitis in the right colon. This patient could very well be a case of acute diverticulitis of the right colon, although such a lesion is quite uncommon.

The next group of cases that I would include as diagnostic problems in the acute surgical abdomen are those of perforated viscus. What perforated viscus might this patient have? It might be a gastric ulcer that has perforated, a carcinoma of the stomach that has perforated, or a perforated duodenal ulcer. Does any of these fit the picture of our patient? No. The clinical picture of a perforated ulcer of the stomach or duodenum is usually typical, and we usually have no great difficulty in establishing the diagnosis. The abdominal rigidity and intense pain are extremely characteristic. Here once again, I doubt that a man with perforated peptic ulcer would allow his doctor to see him two or three times without receiving a hypodermic. Also, at the onset, none of the perforations of the types mentioned so far are characterized by such a high fever.

Could this be a perforated gallbladder? I think it would be very unusual—so much so, in fact, that it is accepted surgical practice in some institutions to treat all cases of acute cholecystitis conservatively, and if there were appreciable danger of perforation that would not be an accepted practice.

Ruptured appendix—I shall leave this for later.

What about perforation of the bowel, especially the large bowel? The small bowel, other than the duodenum, as far as I know, almost never perforates spontaneously, but the large bowel will perforate if it is the site of a diverticulitis; and occasionally a carcinoma of the bowel will

perforate into the abdominal cavity. If this were an acute diverticulitis or a perforated carcinoma of the colon, I might say the symptoms would fit, for unlike a ruptured appendix, the carcinoma or diverticulitis that perforates is not an immediate disaster. There is a tendency for these lesions to perforate by "leaking" rather than by "exploding." There is a tendency for them to leak a little, give the symptoms of an acute abdomen and then be walled off. This might go on with recurrent episodes for some time. If the leak is tremendous, then of course the disaster would be great. So much for a perforated viscus.

How about a bowel obstruction either from hernia or from other cause? If there is an obstructing hernia or a strangulated hernia, there should be some evidence of hernia on physical examination, but there was none. Then, too, small bowel obstruction does not start as this man's situation did. In the typical picture of early small bowel obstruction there is no fever, there may be some vomiting, depending upon the level, but there is no abdominal rigidity and there is no abdominal tenderness early in the disease. The insidious aspect of an early small-bowel obstruction is the severity of the cramping pain with absence of physical signs. There is no rigidity, there is no spasm, there is no tenderness. I would say a bowel obstruction is rather unlikely.

The only other diagnostic possibility that I have included in my brief list is a mesenteric vascular occlusion. This could occur, of course, in a man of 64 years. It is my understanding that it is most common in one who is fibrillating or whose heart rhythm has changed, but this is not necessarily so. As I understand it, the characteristic clinical finding of the mesenteric vascular occlusion is pain, possibly accompanied by vomiting and diarrhea, with the stool usually containing blood. As the disease progresses over two or three days, signs of an intestinal obstruction appear.

To return to acute appendicitis, the characteristics of that condition are generalized abdominal pain, tenderness, and rigidity which eventually localize in the right lower quadrant, in association with nausea, vomiting, and elevation of temperature.

Now as regards the operative report, there are two or three things that have interested me. I know nothing of the pathologist's findings—indeed I was supplied no more information than is contained in the clinical history, with only a single exception, if it deserves to be called that. The only additional information I requested was whether or not the operative report had been quoted verbatim in the clinical history. Was this actually a quotation as the report was given? The answer was, "Yes." I should now be particularly interested to learn whether the report was dictated as soon as the operation was finished, for as quoted it indicates that the surgeon opened the man's abdomen, removed his appendix, and

then explored his abdomen. I believe it is common practice that if you open the abdomen for acute appendicitis and the appendix is normal, you do your exploring first. You may take the appendix out before you are through with the operation, but I think it would be an unusual performance at the operating table to remove a normal appendix first, particularly since the surgeon was operating through an incision that allowed him considerable mobility. In other words, I think it would be unusual to remove a normal appendix at the onset, and then explore the abdomen. Now this is circumstantial evidence by indirection, but to my curious mind this is evidence of a sort. We often take out an appendix that isn't acutely inflamed, but since we are looking for something, and the patient is sick, we do our exploring before we removed the normal appendix. So I think that this surgeon removed a pathologic appendix. In addition to that, he did a rather thorough exploration, and he found nothing. He mentioned a distended gallbladder, but that, I think, hasn't much significance. He mentioned that he felt diverticula in the descending and sigmoid colon, and one might ask, "Did the man have a diverticulitis of the right colon?" If so, I don't think he would have missed it, for there should have been a mass. The only other possibility is that this man may have had a carcinoma of the cecum or ascending colon. I do not know. I think that this outside possibility remains, for sometimes an exploration is not as easy to do and is not as easy to interpret at the operating table as it is to put on paper and talk about. I am concluding, though, that an acute appendix was removed.

The postoperative events are summarized, too. I will go over them hurriedly. On the third postoperative day the patient had an enema. Up until then, I think, he was doing well. It was of interest to me, too, that the patient was given a rather heavy regimen of antibiotics postoperatively, which I do not think would have been prescribed unless infected tissue had been found and removed. Many of us use penicillin and other antibiotics more or less routinely following many types of surgery, but we are not accustomed to use them quite so vigorously unless diseased or infected tissue has been found and removed. On the fourth postoperative day, the patient had severe pain in the area of his incision, with nausea and vomiting. On the sixth postoperative day he had a bloody discharge from his wound. Sero-sanguineous discharge from a wound is typical of wound disruption. On the seventh postoperative day he was distended, and also on the seventh or possibly the eighth postoperative day, I couldn't quite follow the sequence, he was moribund.

What did he die of? I had every intention of going through a rather long list of possible postoperative complications that may follow or be

expected to follow an appendectomy, but time is running out on me. So this only would I suggest about his cause of death: We know his wound failed to heal. Whether his bowel actually eviscerated or not, I do not know, but I think it may have done so. There is no note as to disruption of the abdomen. But wound disruption has been said to carry a mortality of about 30 per cent. This figure may no longer be quite accurate in the days of antibiotics, and I think many such reports preceded their widespread use. Why do patients with wound disruption die? What do they die of? They die of peritonitis, which this man could well have had. He could have had an overwhelming peritonitis. They die of intestinal obstruction, which is common in a wound disruption. They sometimes die of hemorrhage. They sometimes die of acute dilatation of the stomach, and they sometimes die of shock. This man had a wound disruption. Could it have been the cause of death? I don't know.

There is one other possible factor and that one uncommon, fortunately; but a lethal postoperative complication following appendectomy is a fecal fistula. A fecal fistula may occur, and if a drain is present it may not be a catastrophe, for there is an outlet for the fecal content. Of course fecal fistula following an appendectomy may very well occur after an enema. Whether that has anything to do with this patient, I don't know. Most of us do not use drains in appendectomy cases any more, so if we did have this catastrophe of a leak from the appendiceal stump, the patient would get an internal fecal fistula. The peritoneal cavity would be literally filled with fecal content, resulting in a lethal peritonitis. Oddly enough, an *E. coli* peritonitis is not always characterized by distinctive physical signs in the abdomen. So I would equivocate just a little bit as to the cause of death. I would surmise that it was due to a wound disruption, with bowel obstruction and peritonitis which go with the wound disruption; or death might have been caused by a leaking appendiceal stump followed by an intense devastating peritonitis.

Dr. Crowley's Clinical Diagnosis—Acute peritonitis with wound disruption and possible bowel obstruction, after an appendectomy for acute appendicitis.

Dr. Coleman: Dr. Crowley has given us his diagnosis. Are there others?

Dr. A. M. Gordon: Dr. Crowley did not mention much jaundice terminally in this patient. In a case of acute appendicitis that we had years ago at old Broadlawns Hospital, I don't think that the patient had a wound disruption, but he did follow a course very similar to this one's.

Dr. C. J. Peisen: I suggest pyelophlebitis of the portal system.

Dr. R. A. Weston: This sounds like a ruptured appendix.

Dr. E. D. McClean: I believe this patient had a paralytic ileus.

PATHOLOGIST'S REPORT

Dr. Coleman: At autopsy, the body was well developed and well nourished, weighing approximately 170 pounds. The abdomen was covered by a large dressing. When this dressing was removed, the right rectus surgical incision was exposed, which measured approximately 13 cm. in length. The lower 5 cm. of this incision were gaping, and thick, brown, purulent exudate was oozing from it. Although the remainder of the incision appeared to be healed superficially, a large abscess in the anterior abdominal wall was exposed, extending along the entire extent of the incision. On opening the peritoneal cavity, we found numerous dilated loops of small intestine. Present in the right lower quadrant was a large abscess partially walled off by loops of small bowel. The walling off was incomplete, however, for exudate was noted over the serosal surface of the loops of small bowel, and exudate was also noted in the upper right quadrant. No mechanical obstruction of the bowel was present. The appendiceal operative site was examined, and the ligature was still in place, with no leakage present. No perforations of the bowel could be demonstrated, and there were no diverticuli of the colon or the small bowel.

Examination of the heart revealed moderately

severe arteriosclerotic heart disease. The heart weighed 410 Gm., and numerous atherosclerotic plaques were noted in both right and left coronary arteries. No occlusions were present. Areas of atelectasis were noted in both lungs, and the bronchi contained purulent exudate. No areas of pneumonia were observed. The liver was enlarged, and fatty metamorphosis of moderate degree was present.

The adrenal glands revealed both gross and microscopic changes. Grossly, the adrenal glands were of normal size, but the cortex was very pale and the cortex and medulla were very friable. Microscopically, marked granularity with vacuolization of the cortical cells was observed.

Bacteriological studies performed on the exudate from the peritoneal cavity yielded a gram-negative bacillus identified as *Escherichia coli* and a gram-positive coccus identified as *Staphylococcus albus*. These organisms, as determined by the disc technique, were resistant to penicillin, dihydrostreptomycin, aureomycin, terramycin, chloromycetin, magnamycin, erythromycin and Polymyxin B.

AUTOPSY DIAGNOSES

- (1) Peritonitis with paralytic ileus.
- (2) Arteriosclerotic heart disease.
- (3) Wound abscess with wound separation.
- (4) Adrenal cortical changes secondary to peritonitis.

The cause of death in this patient was peritonitis and paralytic ileus following appendectomy.

A review of the surgical report on the appendix removed from this patient reveals an acute focal appendicitis superimposed upon a chronic appendicitis with obliteration of the lumen in the distal portion of the appendix. By focal appendicitis I refer to an acute inflammatory lesion, with ulceration of the mucosa of the appendix and with spillage of purulent exudate into the lumen of the appendix. This case illustrates the development of peritonitis following appendectomy. F. F. Boyce, in his book "Acute Appendicitis and Its Complications," states, "Peritonitis which develops after operation does not differ greatly from peritonitis occurring following rupture of the appendix."

The mortality rate of appendicitis has been greatly reduced in the past few years. A recent statistical analysis of policyholders of the Metropolitan Life Insurance Company indicates that during the ten-year period from 1940 to 1950 there was a reduction in mortality rate of approximately 1,000 per cent in acute appendicitis in children and a reduction in mortality rate of approximately 700 per cent in younger-adult age groups. In patients over the age of 55, however, there was a reduction of only 300 per cent. The conclusions reached on the basis of this study were expressed as follows: "The rapid decrease

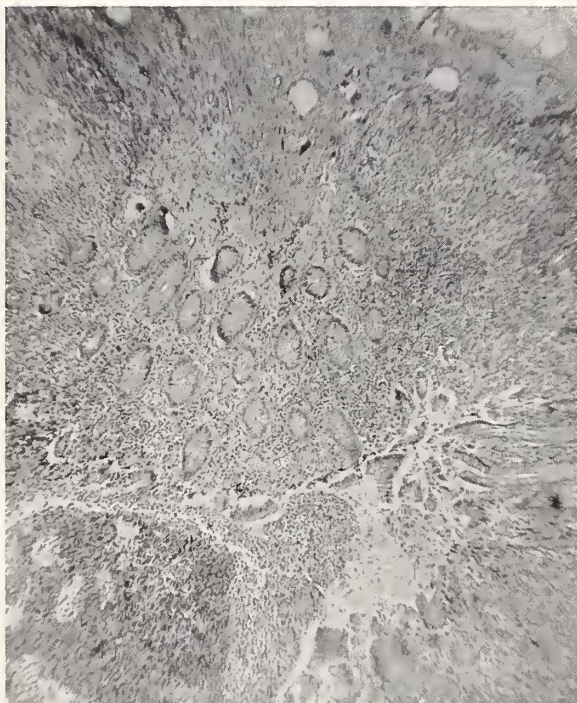


Figure 1. Photomicrograph of appendix showing exudate in the lumen and scarring of the distal portion.

in the death rate from appendicitis in recent years is undoubtedly attributable in large part to the widespread use of antibiotics against peritonitis, a complication which is responsible for most of the deaths charged to appendicitis."

Boyce, in Charity Hospital, New Orleans, reached the same conclusion in his study of 320 deaths due to acute appendicitis, for spreading peritonitis with its complications was the immediate and overwhelming cause of most deaths in acute appendicitis. Boyce further states, "Acute appendicitis carries an unduly high mortality in young children and an inordinately high mortality in middle and later life. Whether the higher rates in these periods of life are due to inherently more serious disease, to diagnostic difficulties, to delays in treatment introduced by the high proportion of atypical cases, or to other causes, the end result is the same."

It would appear that in this patient the resistance of the microorganisms causing the peritonitis to all of the antibiotics available was responsible for the failure of treatment, and the resistance of the patient to infection must have been low, for there is nothing in the history to suggest usual soiling of the peritoneal cavity.

Dr. L. D. Powell: This is a very interesting case and I am glad to have had the opportunity of listening to this discussion. In earlier days we always feared peritonitis as a complication of acute appendicitis. With antibiotics readily available we tend to forget about this danger.

Dr. E. J. Drew: This case points up some of the difficulties encountered by the surgeon at the operating table. The surgeon in this case undoubtedly believed that the appendix removed from this patient was normal. Subsequent studies showed that it was diseased. Certainly no perforation was present, and we ordinarily expect to see peritonitis only when the inflamed appendix is perforated.

Dr. Coleman: I have discussed this case with our bacteriologist, and we have concluded that the growth of these two organisms commensally may have contributed to their resistance to the antibiotics. Several studies have been made which would indicate that organisms which individually are sensitive to antibiotics are resistant when placed with another organism with which it grows commensally. Dr. Irving do you have any comments from the radiologist's standpoint?

Dr. N. W. Irving, Jr.: I am sorry to state that no x-rays were taken on this patient. I am sure that a flat plate of the abdomen, however, would have shown radiological evidence of ileus.

Dr. Coleman: This concludes the discussion of this most interesting case.

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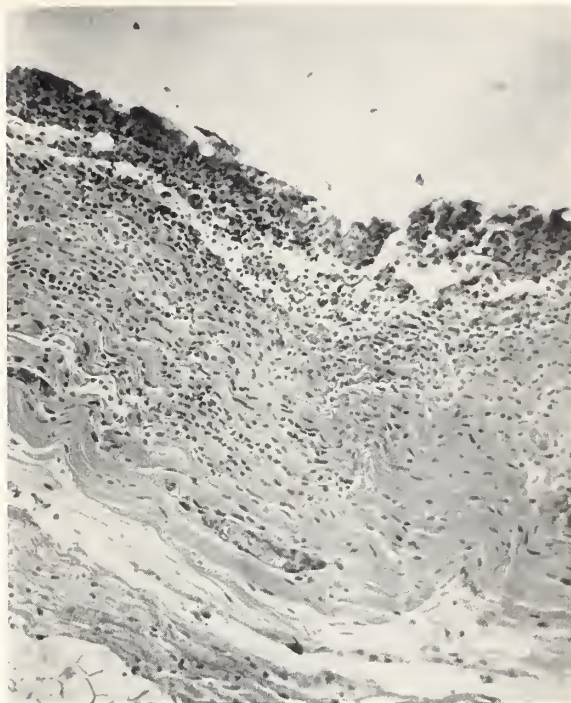


Figure 2. Photomicrograph of urinary bladder showing purulent exudate on peritoneal surface.

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AMERICAN FRACTURE ASSOCIATION

The annual meeting of the American Fracture Association, in Houston, Texas, October 11-14, 1954, will include papers and discussions by Drs. P. T. Holland, Bloomington, Indiana; F. O. McGeehee, Houston; J. B. Erich, Rochester, Minnesota; Hugh Burke, Dixon, Illinois; C. L. Barrett, Bellfontane, Ohio; F. G. Pipkin, Kansas City, Missouri; Robt. Goodall, Houston; J. J. Toland, Philadelphia; R. O. Whitson, Baytown, Texas; Earl McBride, Oklahoma City; Peter Wright, Augusta, Georgia; O. R. Carlander, Camden, N. J.; H. E. Hipps, Waco, Texas; R. A. Vargas, San Bernardino, Calif.; R. B. Elliott, Houston; H. D. Junkin, Paris, Illinois; G. W. N. Eggers, Galveston; W. C. Basom, El Paso; Anthony DePalma, Philadelphia; W. O. Carson, Bowling Green, Kentucky; Russell Harris, Oklahoma City; B. F. Boylston, Houston; H. H. Jordan, New York City; P. L. Day and J. J. Hinchey, San Antonio; F. A. Bloom, Houston; J. J. Hersh, Pittsburgh; Kenneth Duff, Houston; A. H. Diehr, St. Louis; H. A. Springer, Cincinnati; and D. C. McKeever, Houston.

An attractive program of entertainment for the attending doctors and their wives has been arranged, climaxed by a weekend plane trip to Mexico City after the Houston meetings. Mexican physicians have arranged a two-day clinic program for the American visitors.

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NOW IS THE TIME . . .

In company with the officers of the AMA, we have our fingers crossed and we are hoping fervently that federal reinsurance of hospitalization and surgery risks is dead. But since, in his radio-television address to the nation at the close of the 83rd Congress, President Eisenhower has indicated clearly that it won't remain so if he can help it, it's time for Medicine, along with the health-insurance plans it helps to sponsor and the private insurance companies, to start stockpiling ammunition for a repetition of last summer's fight.

A letter sent on June 30 to Rep. Charles A. Wolverton (R., N.J.) by Stanford Miller, Vice-President of the Employers Reinsurance Corporation, of Kansas City, Missouri, most capably sets forth the reasons why the federal government should not attempt helping insurance to cover substandard risks. Dr. George F. Lull, Secretary of the AMA, has copies of the full letter for distribution to physicians who request them, but the following are what seem to us the major points that Mr. Miller made—points that doctors can serve free enterprise and the other best interests of America by reiterating in their private conversations with representatives and senators.

(1) *Reinsurance of even slightly substandard risks is a marginal undertaking that can be handled in only two ways, both of which are bad.* Mr. Miller says that private reinsurers have attempted it and have given up because it necessitated supervision of each and every phase of the primary company's entire business. By a private company, that supervision is paternalism; by the

federal government, it would constitute socialism. If the government were to fail to supervise or were to supervise unsuccessfully, it would have to subsidize health insurance and eventually would own it.

(2) *Federal participation would drive private reinsurance companies out of business.* The government plan would not be set up to make a profit, or even to pay into the Treasury the amounts for which private reinsurers would be liable in taxes on a comparable operation. Thus, whether it were otherwise satisfactory or not, federal reinsurance would kill off the companies now operating in the field.

(3) *Private pre-payment plans, primary insurers and reinsurers can't possibly provide protection for paupers or for people who are already ill.* Insurance, by definition, is the assuming of a risk—as distinguished from a certainty—of loss. Thus, any attempt to blanket in any considerable number of individuals whose benefits are absolutely sure to exceed their premium payments is an out-and-out violation of the insurance principle, one which could be corrected only by government subsidy or by increased premium payments from genuinely insurable people. Reinsurance for such a purpose would be entirely pointless.

(4) *Care for the medically indigent must continue to be provided either as charity or as dole, and preferably at the local level where supervision can be closest.* If, through government participation, non-paying policyholders were provided facilities and services virtually indistinguishable from those furnished to premium payers, the number of free riders would multiply.

This federal reinsurance idea is an eight-lane superhighway to socialism, and the people who contend that, in saying so, the AMA resembles the boy who kept crying, "Wolf!" have another "think" coming.

CORRECTION

The JOURNAL was misled last month in assuming the accuracy of a paid announcement in the Hampton press that Dr. F. G. Carlson had entered into an association with "Dr. Bernard Silby," in Mason City. The new man is an optometrist who merely is to occupy part of the premises being vacated by Dr. Carlson, and the announcement which he inserted in the newspaper was incorrect in saying that there was to be an association. We have been assured that it was published wholly without Dr. Carlson's knowledge or consent.

Because we rely to a considerable extent upon newspaper stories for the news we publish in our Personals column, we should like to ask that the officers and members of country societies assist us by calling attention to misrepresentations, significant omissions or other errors in the news of doctors' activities that they find in their local papers. By that means we can be prevented from repeating them.

WORLD MEDICAL ASSOCIATION NEEDS MONEY

The World Medical Association, the only international medical organization that is non-governmental and speaks from the free-enterprise standpoint, is in desperate need of financial support. The funds on hand at the present time are sufficient neither to pay the expenses of the next General Assembly nor to operate the organization during the coming year.

Composed as it is from the medical associations of the countries of the free world, it is dependent for financial support upon the dues paid by those associations and by the physicians in those countries. The United States Committee necessarily has had to stand the greater part of the cost. Individual physicians and laymen have done their parts by paying yearly dues of \$10.00.

Founded in 1947, the World Medical Association has earned increased respect from international governmental organizations. Its Declaration of Geneva, written and accepted in 1948, is a modification of the Hippocratic Oath. Written as an aftermath of the German war crimes, it was designed to set forth principles of conduct for the guidance of physicians in war and peace. Approved also, in 1949, was an International Code of Medical Ethics. Both of these statements have been published in earlier issues of the JOURNAL, as have the objectives of the World Medical Association.

In these troubled times, we often ask ourselves what we, as individuals, can do to help bring peace to our world. President Eisenhower, in his talk at the State Fair in Des Moines, on August 30, gave a significant reply that applies, for us, to the World Medical Association. He said that each person should try to obtain a clear understanding of existing situations, to appreciate why certain actions are necessary, and to help direct the public opinion of the world.

All of us as individual physicians can add our strength to that of other free physicians of the world by joining the World Medical Association. Dr. Louis H. Bauer, past president of the AMA and secretary-treasurer of the U. S. Committee, has this to say: "There is a constantly growing tendency for decisions affecting all of medicine to be made at the international level. This tendency is a threat not only to the future of medicine itself, but to the rights and privileges of every practicing physician. One example is the current attempt of incompetent organizations to draft a Code of International Medical Law that would affect all physicians in peace as well as in war. The World Medical Association is the only international organization which can and does speak from the non-governmental standpoint and from the standpoint of free enterprise. However, it can continue to defend your interests only if it has adequate financial support."

The language of medicine is universal; its aims

and ideals are the same wherever men have dedicated themselves to the prevention and treatment of disease. Our interests are the same as those of physicians in England, South Africa or Tahiti. Let's support our World Medical Association. Dues sent to State Society headquarters will be forwarded to the New York office. *The need is now.*

HOSPITALS SEEK TO EXCEED THEIR FUNCTION

It is unfortunate that the Iowa Hospital Association and its representatives have seen fit to dispute the Iowa attorney general's ruling as regards the practice of medicine by corporations. In doing so they have given the State Medical Society and its members some rather adverse and entirely unwarranted publicity. It stands to reason that our attorney general would base his opinion on past court rulings. There have been ample court decisions to substantiate it. Moreover, his ruling is further strengthened by the fact that the attorney generals of several other states have issued similar opinions.

The various specialty societies, most or all of the state medical societies and the AMA have long defined radiology, pathology, anesthesiology and physiatry as the practice of medicine the same as any other specialty. The American Hospital Association house of delegates concurred in this in 1953.

It must be kept in mind that when a state issues a license to a professional person it grants that individual the right to practice his profession, but, more important, it imposes on that person definite responsibilities toward his patients or clients and toward the public. These responsibilities can only be delegated to an individual and not to a corporation. It is absurd even to think of medical services being under the control of a lay corporation.

Physicians, individually and as a group, have always shouldered their responsibilities. Yet the hospitals now contend that it is their duty to see that certain specialists are provided and that those specialists properly perform their services.

What the hospital association failed to make public is the matter that finally brought this issue to a climax, namely the packing company contracts issued by Health Service, Inc., which is owned and directed by the American Hospital Association. These contracts agreed to pay for several medical services only if performed by a paid employee of the hospital.

Interestingly enough, these contracts did not outline any qualifications for that "paid employee." Thus, a hospital could have any employee, whether qualified or not, render the services, and the hospital could collect for them, while a well trained physician on the staff of that hospital could not collect for the same services.

If the Iowa Hospital Association should succeed in its avowed purpose of obtaining a reversal of

the attorney general's opinion, very likely hospital administrators will feel that they have the green light to go ahead and hire other specialists on a contract or salary basis, thereby collecting more fees for medical services and splitting those fees with the specialists involved. In fact, this has already been done in some areas. (See "Fee Grab by Hospitals" in the July issue of MEDICAL ECONOMICS.)

We all owe it to our patients and the public actively to support the State Medical Society in its campaign to eliminate the practice of medicine by anyone but licensed individuals.

E. Parish Lovejoy, M.D., President,
in the BULLETIN of the Polk County
Medical Society, August-September, 1954

DR. ERNEST SHAW

Too seldom in this world, it seems, do we honor a man for the contributions he has made to his profession or to the public. There have been many grand men of medicine, all of whom have left their marks in some way upon us who follow. Some have added new discoveries to the science of medicine; others have pioneered in the economics field; and still others have been forerunners in the area of improved public relations. Not all have been given lasting recognition for the work they did, and, to tell the truth, it would be impossible to immortalize all who have done significant work.

Nevertheless, it gave us a great deal of pleasure to read that the Iowa Academy of General Practice, this year, established an annual lecture in the name of Dr. Ernest E. Shaw, of Indianola, and that it gave Mrs. Shaw one of the past president's pins. Dr. Shaw was the first president of the Iowa Academy of General Practice, having been one of the twenty or so charter members of the organization. He served also on the State Society's Committee on Rural Practice, working with S.U.I. College of Medicine to determine what was needed in a course of study designed for the general practitioner. This survey, the purpose of which was the ultimate good of the public in general, had been brought almost to completion at the time of his death, in 1949.

During the 1930's, Dr. Shaw was active on the Society's Committee on Medical Economics. His particular interest lay in the contracts made between county medical societies and county boards of supervisors for the care of the indigent, and he was never too busy or too tired to assist a county. He made many trips over the state to counsel with other groups and to aid them in obtaining satisfactory contracts, and his wide knowledge of the varying conditions made him invaluable. Later, he worked with the FSA in writing contracts for medical care of migratory farm workers.

Along with this activity, he became interested in both hospital and medical insurance and served

on the board of the hospital-insurance company that was the predecessor of Blue Cross. When that organization did not survive and when Blue Cross was set up to provide hospitalization insurance in Iowa, he worked to promote it and served on its first board of directors. Only the fact that he was in military service prevented his being equally active in the organization of Blue Shield.

Physicians who have started practice since 1949 can never know the many different facets of Dr. Shaw's character which led to the establishment of this annual memorial lecture. Possibly the final phrases of his obituary sum it up as well as can be done: "He had a keen and orderly mind, getting down to basic facts without delay; he had enthusiasm and drive and a great capacity for hard work that enabled him to accomplish much; he had a ready wit and a friendliness which made him win friends easily and hold them enduringly. He probably exemplified as well as anyone can what can be accomplished if one lives each day to the best of one's ability."

DECONTAMINATING CRUSHED ICE

Crushed ice is one of the very few health perils that are still frequently mishandled in public eating places and institutions. There can be little doubt that it is a real one. Soda clerks, bartenders, counter help in cafeterias and school dining rooms, and waitresses in restaurants habitually use their bare hands or seldom-washed scoops in transferring the ice from the bin to the customers' glasses, thereby cancelling out the precautions that have been used in protecting the drinking water or other beverage.

Nurses on hospital services likewise are offenders. They sometimes bury bottled soft drinks in the ice bin or permit ambulatory patients, most often children, to help themselves to the ice.

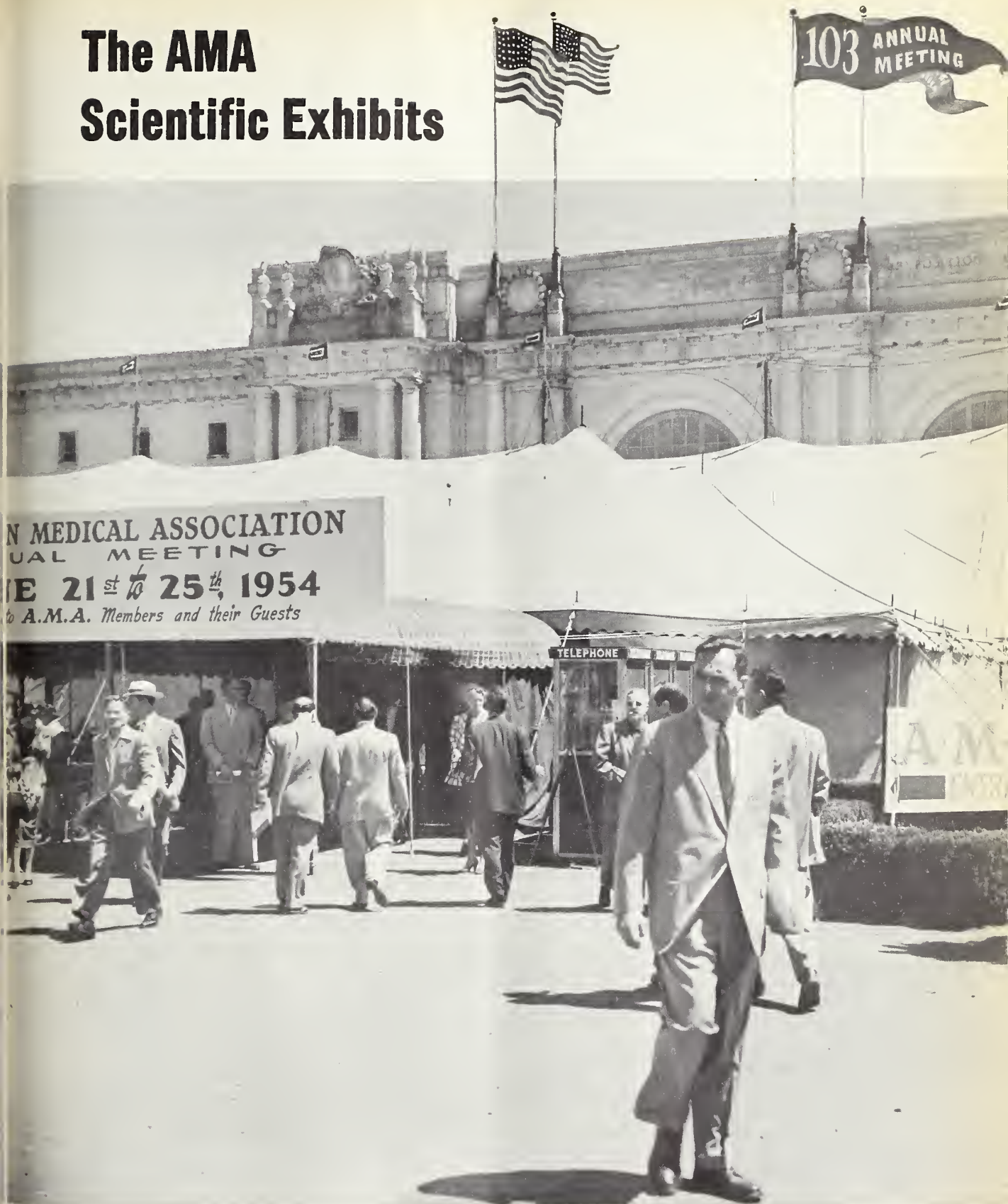
E. W. Moore, E. W. Brown, and E. M. Hall* report experiments in which counts of coliform bacteria being dispensed in drinking water in a university dining hall were cut down from 123 per ml. to between 4 and 88 per ml. through immersing the ice in a sodium hypochlorite disinfecting agent.

The disinfectant—consisting of 25ml. per gallon of sodium hypochlorite in water, further diluted at the rate of 1 fl. oz. per gallon of water—was poured into the cracked-ice bin until the ice was virtually floating. By means of customer polls and blindfold tests, they ascertained that drinks cooled with the disinfected ice tasted no different from those in which undisinfected ice was used.

The stock solution (i.e., sodium hypochlorite diluted just once), if kept in a tightly closed container and refrigerated, will keep for about a month, the investigators stated.

* AMER. J. PUB. HEALTH, 43:1265, (Oct.) 1953, summarized in Abbott Laboratories' publication WHAT'S NEW, 1954, No. 183.

The AMA Scientific Exhibits



THE huge circus tent above, covering the street in front of the San Francisco Auditorium, was needed to house some of the exhibits at the AMA meeting this year to which 42,000 people flocked. To physicians, as usual, "The Greatest Show on Earth" was the Scientific Exhibit section under the direction of Dr. Thomas G. Hull and the Committee on Scientific Exhibit, of which Dr. L. W. Larson, Bismarck, N.D., was chairman. More than 200 exhibits covered phases of 21 different medical specialties. Here, especially prepared for readers of this magazine, is an eight-page picture report showing some of the outstanding exhibits.

HEKTOEN
Gold Medal

WINNER of the Scientific Exhibit's highest honor—the Hektoen Gold Medal for originality and excellence of presentation of investigations—was exhibit on “Aneurysms and Thrombo-Obliterative Disease of the Aorta: Surgical Considerations,” by Drs. Michael E. DeBakey, Denton A. Cooley, and Oscar Creech, Jr., VA, Methodist, and Jefferson Davis Hospitals, and Baylor University College of Medicine, Houston, Tex. Below: Dr. William F. Mengert (l.), Dallas, Tex., chairman of awards committee, presents certificate to Drs. DeBakey (center) and Cooley. Successful replacement of clotted or damaged areas of arteries through grafting was reported in the exhibit. Aortic bifurcation homograft is shown in large picture.





CONCLUSIONS

ELECTROPHORESIS is most valuable
in the diagnosis of disease with
ALTERED SERUM GLOBULIN PATTERNS

The **PAPER** technique renders recognition
of abnormalities with **EXPEDIENCY**
ACCURACY
ECONOMY
RELIABILITY

ed **ELECTROPHORESIS**
EARLY DETECTION of DISEASE
INTRODUCTION into
CLINICAL PRACTICE

EXHIBIT on "Paper Electrophoresis in Clinical Diagnosis" won Hektoen Silver Medal for Drs. Gerald R. Cooper (center), and Emanuel E. Mandel, Communicable Disease Center, U.S. Public Health Service, and Emory University School of Medicine, Atlanta, Ga. Characteristic patterns and results obtained with paper electrophoresis in a general hospital population were presented. Paper electrophoresis permits multiple simultaneous determinations of protein content of body fluids by means of a relatively simple, inexpensive apparatus. Combination of this apparatus with automatic scanning and recording equipment has been developed into a practical and time-saving clinical tool. Drs. Hull (l.) and Mengert (r.) present award to Dr. Cooper.

Honorable Mention

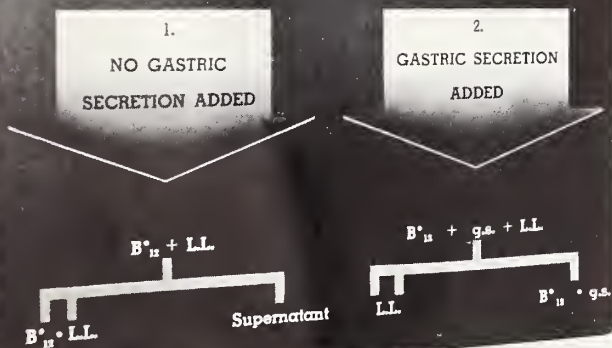
THE SCIENTIFIC EXHIBIT
AMERICAN MEDICAL ASSOCIATION
SAN FRANCISCO - 1954

VITAMIN B₁₂ AND AGING

BINDING CAPACITY OF GASTRIC SECRETION
(g.s.) AS A FUNCTION OF AGE:

A method of measurement was employed, using radioactive vitamin B₁₂ (B^{*}₁₂) and, as the adsorbing agent, the organism *L. leichmanii* [ATCC 4797] (LL.)

SCHEMA:

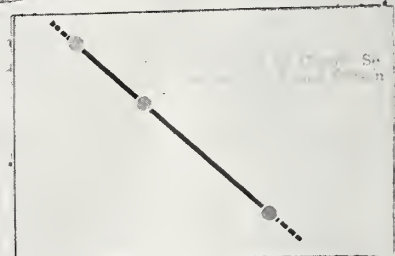


AGE makes a considerable difference in the amount of vitamin B₁₂ retained, it was shown in display on "Vitamin B₁₂ and Aging," by Dr. Bacon F. Chow, Johns Hopkins University, Baltimore. A larger portion of B₁₂ injected intramuscularly is retained by the old than by the young. The gastric juice of older persons without achlorhydria contained a smaller amount of B₁₂ binding substance than similar specimens obtained from young people. The mean B₁₂ serum level of the young was significantly higher than that of the old. Young subjects given 1.0 mg. of B₁₂ orally showed a marked elevation in blood level, while only two out of seven old subjects showed an increase. The greater retention of parenterally administered vitamin B₁₂ and lower serum B₁₂ levels of the aged may be due to desaturation of tissue vitamin B₁₂.

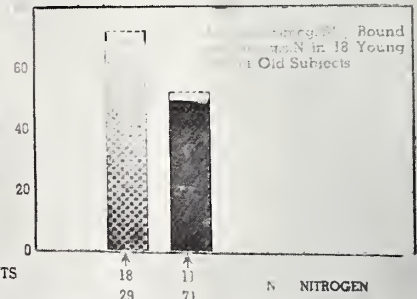
VITAMIN B₁₂ AND AGING

CAPACITY
SECRETION
OF AGE:

RADIOACTIVE
COUNTS
per minute
B^{*}₁₂ + LL



mmcg. B₁₂
Bound per
mg. g.s.N



NUMBER OF SUBJECTS
MEAN AGE

N NITROGEN

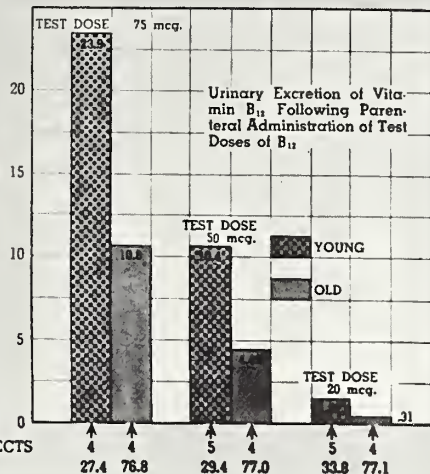
VITAMIN B₁₂ AND AGING

DECREASED ABSORPTION OF B₁₂

RESULTS IN TISSUE DESATURATION. THIS IS MANIFESTED BY:

1. Smaller excretion of parenterally administered B₁₂ (see below)
2. Lower vitamin B₁₂ serum level of the old individual (see chart 5)

MEAN
EXCRETION
OF B₁₂ IN μ mcg.
per 24 hr.

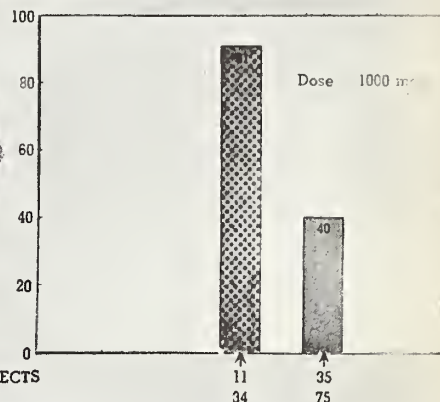


NUMBER OF SUBJECTS
MEAN AGE

VITAMIN B₁₂ AND AGING

INCREASE IN SERUM
LEVELS OF B₁₂ FOLLOWING
MASSIVE ORAL DOSAGE, AS A FUNCTION OF AGE

% OF SUBJECTS
SHOWING AN
INCREASE OF
150 μ mcg. per cc.



NUMBER OF SUBJECTS
AVERAGE AGE

Taking a rise of 150 μ mcg. as a positive response to a dose of 1000 mcg. B₁₂, these data may be summarized as follows:

SUBJECTS	RESPONSE		% POSITIVE RESPONSE
	POSITIVE	NEGATIVE	
YOUNG	10	1	91%
OLD	14	21	40%

The difference with age is statistically significant at the 1% level.

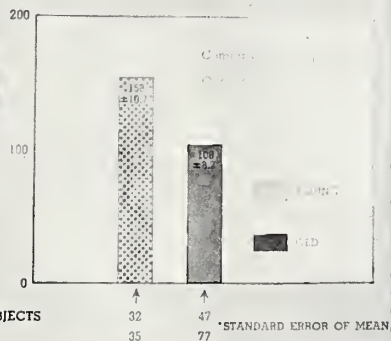
VITAMIN B₁₂ AND AGING

DECREASED ABSORPTION OF B₁₂

RESULTS IN TISSUE DESATURATION. THIS IS MANIFESTED BY:

1. Smaller excretion of parenterally administered B₁₂ (see chart 4)
2. Lower vitamin B₁₂ serum level of the old individual (see below)

MEAN B₁₂
SERUM LEVEL
IN μ mcg.
per cc.



NUMBER OF SUBJECTS
MEAN AGE

*STANDARD ERROR OF MEAN

VITAMIN B₁₂ AND AGING

CONCLUSIONS

1. The gastric secretion of old individuals has less capacity to bind vitamin B₁₂ than does that of young individuals.
2. Old subjects respond less frequently to oral administration of vitamin B₁₂ than do young individuals receiving equivalent dosage (as measured by an increase of 150 micromicrograms per cc. of plasma).
3. The greater retention of parenterally administered B₁₂ and lower serum B₁₂ levels of the aged may be due to desaturation of tissue vitamin B₁₂.

FOOT HYGIENE OF THE DIABETIC

● CONTROL DIABETES

To better resist infection
To combat hyperlipemia - atherosclerosis

● FOOT HYGIENE

Bathe daily
Keep skin soft - oil or tanolin

● SOCKS

2 sizes or $\frac{1}{2}$ inch longer than feet
Avoid binding toes.

● SHOES

$\frac{1}{2}$ inch space beyond toes
Wide - to permit toe movement
and ventilation.
Army last - great toe straight
Change shoes daily
Wear new shoes one hour
Avoid shoe nails.
Do not walk barefoot.

● AVOID FOOT INJURIES AND INFECTIONS

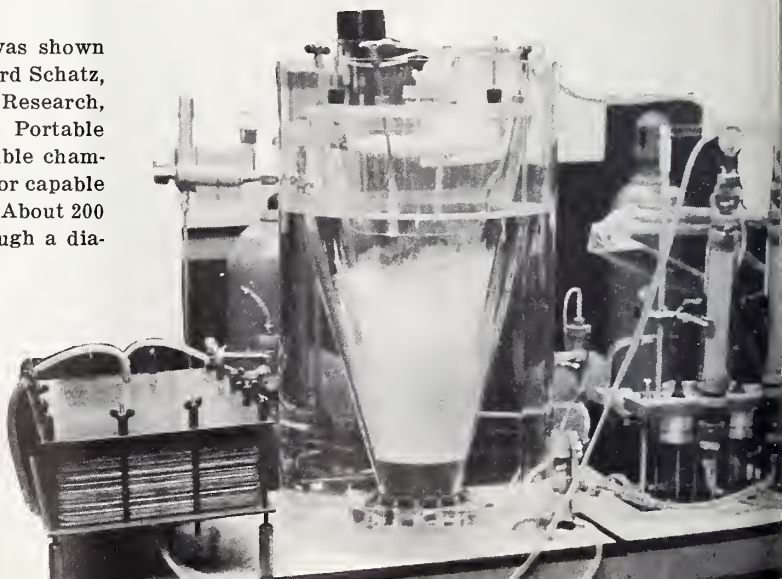
Trim nails straight across - not too short - corner outside nail fold.
No hot water (or chemical) bottles
No electric pads.
Avoid strong antiseptics.
No corn plasters and no poring of corns.
RELIEVE PRESSURE • SOFTEN • TRIM AS IT PROTRUDES
Prevent or treat calluses.
REMOVE PRESSURE • SOFTEN
CALLUS LEADS TO ULCER - CELLULITIS.



MOST foot complications are preventable by proper care of the feet, it was shown in the exhibit on "The Conservative Management of Diabetic Foot Complications," by Drs. William L. Lowrie, W. E. Redfern and Brock E. Brush, Henry Ford Hospital, Detroit.

Amputation for infection or gangrene adds stress to the opposite foot. By controlling infection, antibiotics permit a safe trial of conservative therapy. Results have been very encouraging. Exhibit won certificate of merit in general practice section.

● An artificial heart-lung-kidney machine was shown by Drs. P. F. Salisbury, Andre Rieben, Bernard Schatz, and Michael Kunec, Institute for Medical Research, Cedars of Lebanon Hospital, Los Angeles. Portable equipment demonstrated consisted of a double chamber blood pump and semiautomatic oxygenator capable of handling up to 5,000 cc. of blood a minute. About 200 to 300 cc. of this flow can be diverted through a dialyzer unit in parallel with the oxygenator.



Award Winners Not Pictured:

FOUR of the top award winners have not been pictured in this special report because they contained many minute details difficult to bring out in photographs. They were:

- "Fungous Diseases," by Drs. Emma S. Moss, Albert L. McQuown, and Robert S. Cooke, Charity Hospital of Louisiana and Louisiana State University School of Medicine, New Orleans, and Our Lady of the Lake Sanitarium, Baton Rouge, La., awarded the Billings Gold Medal for excellence of correlating facts and excellence of presentation. It showed in superb detail information on clinical, pathological, and mycologic characteristics of the systemic and superficial fungous diseases.

- "Portal Hypertension," by Drs. Donald C. Balfour, Jr., Telfer B. Reynolds, William P. Mikkelsen, Arthur C. Pattison, and Milton R. Hales, University of Southern California School of Medicine and Los Angeles County Hospital, winner of the Billings Silver Medal. The exhibit showed injected livers of

patients with cirrhosis and methods of determining pressures obtained by hepatic vein catheterizations on patients with cirrhosis.

- "Naval Medical Service with the First Marine Division in Korea," by W. W. Ayres, R. N. Grant, and G. C. Beattie, Bureau of Medicine and Surgery, Department of the Navy, Washington, D.C., winner of the Billings Bronze Medal. Arterial homographs, open flap amputations, and evacuation by helicopter were among procedures pictured.

- "The Melanocyte Stimulating Hormone," by Drs. Aaron Bunsen Lerner, Thomas B. Fitzpatrick, Kazuo Shizume, and Howard S. Mason, University of Oregon Medical School, Portland, Ore., winner of the Hektoen Bronze Medal. The exhibit demonstrated that the hormone causes darkening of human skin as well as that of frogs, and showed altered pigmentation in Addison's disease, panhypopituitarism, and pregnancy.

HANDLING FOOT COMPLICATIONS OF THE DIABETIC

EVALUATION

- WALKING CAPACITY, DEGREE OF SYMPTOMS.
- CAREFUL CLINICAL EXAMINATION.
 - Palpation of vessel walls and pulses.
 - Condition of skin and subcutaneous tissues
 - Relative color and warmth
- RESULTS OF CONSERVATIVE REGIME.
- OTHER AVAILABLE TESTS.
 - Occlusion index.
 - Sympathetic blocks.
 - Arteriography.

MANAGEMENT

- DIABETIC CONTROL.
- GENERAL HEALTH.
- PROTECTION AGAINST PHYSICAL AND CHEMICAL INJURY.
- ANTIBIOTICS.
- VASODILATORS.
- ANTICOAGULANTS.
- CONSIDER SYMPATHECTOMY.

CONSERVATIVE SURGICAL PRINCIPLES

- ADEQUATE INCISIONS FOR INFECTION.
- ANTIBIOTICS.
- TRIAL OF CONSERVATIVE MANAGEMENT.
- DEBRIDEMENT.
- LOCAL AMPUTATION.
- NO TOURNIQUET OR TIGHT DRESSING.



● Above, left: Certificate of merit in the radiology section went to exhibit on "Resilient Plastic Replicas of Surgical Pathology and Their Clinical Application," by Drs. Clemmer M. Peck, Forrest V. Schumacher, Aubrey O. Hampton, Emergency Hospital, Washington, D.C., and John V. Niiranen, U.S. Navy, Washington, D.C. Dr. Peck (center) accepts award from Dr. Mengert and Dr. Hull. Exhibit explained new method of reproducing surgical pathological specimens in resilient plastic and demonstrated clinical application with plastic models.

● Above, right: Dr. Heron Singher (l.), Ortho Research Foundation, Raritan, N.J., and Dr. Edward T. Tyler (r.), Los Angeles County Harbor General Hospital, accept certificate of merit in urology section for exhibit on "Clinical Features and Chemical Morphology of Semen and Some of Its Variations." Findings presented included results of studies of about 3,000 semen specimens obtained from both fertile and infertile persons.

● Below, left: One of two honorable mention certificates in surgery section was given to exhibit on "Operations for Coronary Artery Disease," by Dr. Claude S. Beck and Dr. David S. Leighninger, University Hospitals, Cleveland. Dr. Leighninger accepted certificate. Exhibit showed results of operation in 4,000 to 5,000 dogs and 150 human beings. Eighty-five percent of patients who could be evaluated had excellent or good results.

● Below, right: Drs. Leo G. Rigler (l.) and John C. Watson (center) received honorable mention in radiology section for exhibit on a rapid film-changing device for conventional radiography. They demonstrated a new type of roll-film cassette which permits very rapid film changing for serial examinations and can also be used at slow speed for conventional radiography. Cutting mechanism separates each film at the end of each exposure. Drs. Rigler and Watson are from the University of Minnesota Hospitals, Minneapolis.

● Honorable mention for miscellaneous exhibits was awarded to exhibit, "Breath Sounds on Tape," by Drs. R. J. Anderson and Armand E. Brodeur, U.S. Public Health Service, Washington, D.C., and Dr. William B. Walsh, Georgetown University Medical School, Washington, D.C., Dr. Walsh accepts certificate from Drs. Hull and Mengert. Normal and abnormal breath sounds recorded on tape were played back through a stethoscope. Recordings were accompanied by x-ray films. Regional medical societies, medical schools, and other professional personnel

may borrow recordings and high fidelity playback equipment to teach chest auscultation.



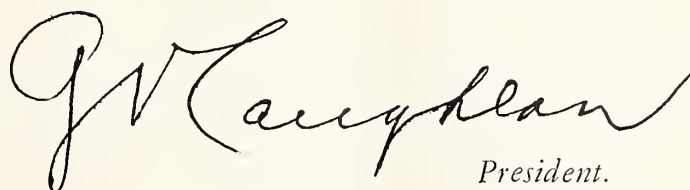
President's Page

One hears a great deal about ethics in professional practice, and, for that reason, this page will be devoted to ethics, which has been defined as the science of moral duty, including moral principles and practice.

As physicians, it is most important that we observe all of the requirements of moral principles in dealing with our colleagues, our patients and the public. The Golden Rule, of doing unto others as you would have them do unto you, includes all ethics.

A physician should strive for a good life, not for a good living, and he should adhere to the highest principles as to fees. All of his professional income should come from those he treats. He cannot profit from the sale of drugs, appliances, or glasses, nor can he receive a profit on any invention for use in medical practice, or for the discovery of any remedy for the cure of illness.

All financial dealings with patients should be so open and fair as to preclude any suspicion of unethical practice.

A handwritten signature in cursive script, reading "J. W. Laughlin". The signature is written in dark ink and is positioned above the word "President.".

President.

Iowa Academy of General Practice

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President-Elect—Frank D. McCarthy, M.D., Sioux City

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Executive Secretary—Mrs. Elizabeth Nelson, 3600 Franklin, Des Moines

POSTGRADUATE COURSE HOTEL MONTROSE, CEDAR RAPIDS THURSDAY, NOVEMBER 4, 1954

- 8:00 a.m. Registration
- 9:00 a.m. "Management of Diabetes During Pregnancy"
Priscilla White, M.D.
Joslin Clinic, Boston, Mass.
- 10:30 a.m. "Expected Behavior Patterns in Children"
Lee Forrest Hill, M.D.
Past-President, American Academy of Pediatrics, Chief of Pediatric Staff, Blank Hospital, Des Moines Iowa
- 12:15 p.m. Luncheon
Address—"Iowa Football Highlights"
Mr. Tait Cummins—TV and Radio Sports Director, Stations WMT and WMTV, Cedar Rapids
- 2:00 p.m. "Recent Developments in Diabetic Therapy"
Priscilla White, M.D.
- 3:30 p.m. "Acute Illness in Infancy"
Lee Forrest Hill, M.D.

DOCTOR, WHO IS YOUR DOCTOR?

This question raises a very important problem. It is common belief that doctors are poor patients. We seem to believe that we are inexpendable. We plunge pell-mell into a lot of work as if the world would disintegrate if we did not get it done. We do not allow minor ailments to keep us from our daily work. We even treat the sick on days when we are sicker than our patients. We work when we have a fever, when we sneeze and cough, when we have an arm or leg in a cast, or when we rely on digitalis or nitroglycerine to keep our hearts working. We do not take time to have our hernia repaired, or if we do have our gallbladder or appendix out, we are back at work in ten days or so. More physicians die of heart disease than any other group by a spectacular margin.

It stands to reason that if we and our work are so important, we should have the common sense

to take good care of ourselves. If any person asks us what to do to keep well, we quickly and wisely advise him to see his doctor. But what do we do? Well—as a general rule—not what we tell others, in all seriousness, to do.

Recently, Dr. Merrill Shaw, former Vice-President of the A.A.G.P., while dying of cancer, appealed to all members of the medical profession and to members of the Academy in particular to get themselves family doctors in whom they could place confidence. He urged the doctor and his family to submit to regular examinations and not to ignore symptoms that occur. Thus the A.A.G.P. has launched a campaign for "A Family Doctor for Every Doctor's Family." This is important.

Dr. Shaw's appeal presents a triple challenge to us doctors. *First*, we should guard our own health and that of our wives and children. It is neither reasonable nor intelligent for us to treat ourselves or our families with whatever free samples or drugs we have in our offices. At times, our judgment is impaired when it comes to treating those close to us. We exhort patients not to diagnose and treat themselves, but immediately proceed to diagnose and treat our own ills.

The *second* challenge is to set an example to our patients and to demonstrate to them that we believe what we preach. In that way, we preach what we practice. We say the best medical care comes from every family's having a family doctor. If specialists are needed, the personal physician or family doctor should aid in selecting the specialist, just as we do daily for all our patients. The family doctor can decide better than the patient when specialist services are needed.

To determine whether you have a personal or family physician, answer the following four questions.

1. Do you know, without a moment's hesitation, whom you would consult or call in case of illness in yourself or your family?

2. Would you consult this doctor whether the trouble were abdominal pain, earache, or an injured ankle?

3. Does this doctor know in advance that you are depending on him and would call him?

4. Do you know, without any doubt, that he will respond to your call to the best of his ability?

If you can answer "yes" to all of these four

questions, then you already have a personal or family physician. If not, you should begin to do some thinking. A family doctor saves us worry and anxiety. Periodic health examinations are well worth our time and either give us assurance that we can continue our heavy work, or help us to rearrange schedules so that our lives and usefulness can be prolonged. Besides that, it is a source of personal satisfaction to know that a physician we trust understands our physical condition and the physical conditions of the members of our family, and that he will be available for our needs. This is being consistent with what we advise our patients and will increase their faith in us.

The *third* challenge is for us to be worthy to be chosen as a doctor's family doctor. We must realize that a doctor's doctor will be chosen mainly on the basis of professional accomplishment and proficiency, sincerity and integrity. Social friendships, memberships in medical organizations, political or civic prominence, church or country club affiliations will not figure in such a choice. So it should be a part of every family doctor's program to keep himself in such a position that he will be considered worthy to take care of his colleagues and their families.

Doctor—select and consult your family physician.

WISCONSIN AAGP INVITES EXHIBITS

The Wisconsin Academy of General Practice has announced that it will accept requests from physicians and surgeons wishing to present scientific exhibits at the Academy's Sixth Annual Scientific Assembly, November 30 and December 1, at the Milwaukee Auditorium.

The Academy has reserved approximately ten booths for scientific displays and will furnish the booths, including tables, chairs and electricity, free to a limited number of applicants. The booths are ten feet by ten feet. There will also be commercial exhibitors at the convention.

More than four hundred physicians are expected to attend the two full days of scientific talks, which feature speakers from Harvard and Chicago medical schools, the Mayo Clinic and various other locations. Last year, three hundred physicians attended a two-day program at the smaller Hotel Schroeder.

Qualified physicians and surgeons interested in presenting scientific exhibits are requested to write for further information to Robert A. Dufour, Executive Secretary, Wisconsin Academy of General Practice, 758 North 27th Street, Milwaukee 8, Wisconsin.

Plan to attend the Iowa State Medical Society's Annual Meeting, April 24-27, 1955, in Des Moines.

TRUDEAU SOCIETY MEETING

The Fall Clinical Meeting of the Iowa Trudeau Society will take place at Broadlawns Polk County Hospital, Des Moines, on Sunday, October 17, 1954. The Education Committee of the Iowa Academy of General Practice will allow three hours of formal postgraduate credit for attendance at these sessions.

10:00 a.m., Dan Crowley, Jr., M.D., presiding.

Psittacosis in Iowa—Kenneth K. Kingsbury, M.D., Ottumwa.

Diagnosis of Genito-urinary Tuberculosis—John K. Lattimer, M.D., Assistant Clinical Professor of Urology, Columbia University, and Director, Research Center for Genito-urinary Tuberculosis, VA Hospital, Bronx, New York.

Treatment of Genito-urinary Tuberculosis—Dr. Lattimer.

Discussion—Rubin H. Flocks, M.D., Head, Department of Urology, S.U.I.

Luncheon—Broadlawns Hospital.

2:00 p.m., Paul Seebohm, M.D., presiding.

Diagnosis and Current Treatment of Osseous Tuberculosis—Edward T. Evans, M.D., Clinical Associate Professor of Surgery, University of Minnesota, Minneapolis.

Discussion—Donald Blair, M.D., Des Moines.

Modern Practical Methods of Diagnosis and Treatment of Pulmonary Emphysema—Frank Martin, M.D., Assistant Professor of Medicine, University of Minnesota, and staff member, VA Hospital, Minneapolis.

Discussion—Harold Margulies, M.D., Des Moines. Problem of Pericarditis—David C. Funk, M.D., Assistant Clinical Professor of Medicine, S.U.I., and staff member, VA Hospital, Iowa City.

COURSE IN INFECTIOUS DISEASES

The University of Minnesota announces a course in Infectious Diseases for General Physicians, to be held at the Center for Continuation Study, on the Minneapolis campus, November 18-20. Guest speakers will be Drs. Harry Eagle, Chief, Section of Experimental Therapeutics, National Microbiological Institute, Bethesda, Maryland, and Ellard M. Yow, Assistant Professor of Medicine, Baylor University School of Medicine, Houston. Dr. Eagle will also present the annual JOURNAL-LANCET Lecture on Thursday evening, November 18. Doctors from the Department of Medicine of the University of Minnesota Medical School and from the Mayo Foundation will complete the faculty. Requests for programs and other information should be addressed to Dr. Robert B. Howard, Director of the Department of Postgraduate Medical Education, University of Minnesota, Minneapolis 14.

BLUE CROSS



BLUE SHIELD

Physicians Must Continue Active Participation

Because the interest of Americans in prepaid health protection is increasing daily, and because the pressure for so-called complete, low-cost health plans continues unabated, it is no more than natural that governmental authorities are likely to make an attempt at obliging them.

Had it not been for the foresight of the doctors and hospitals that created Blue Cross and Blue Shield, compulsory federal insurance would now be the law of the land.

The public appreciates the many paid-in-full benefits, the possibility of retaining coverage after retirement, the absence of cancellation clauses, and the other excellent features of Blue Cross and Blue Shield. And it is aware that those Plans have extended coverage to farmers, employees in small businesses, and housewives.

The July, 1954, *READER'S DIGEST* contained a most effective article for Blue Cross and Blue Shield entitled "Be Sure You Know What Is in Your Health and Accident Policy." But how much more convincing would a strong appeal from a local physician or hospital be as a means of interesting people in adequate protection!

Some Plans have enrolled well over 50 per cent of the people in their areas. Can you help increase the percentage enrolled in your community?

Last year, Blue Cross Plans paid \$675,000,000 for hospital care rendered to members. That is \$76,954 for every hour of every day. Blue Shield Plans, in 1953, paid \$254,485,869 for professional services rendered members. Both these figures will be exceeded in 1954.

We think that doctors should both actively support Blue Cross and Blue Shield and help to guide their destiny.

IF THE DOCTORS SHIRK THOSE TWO RESPONSIBILITIES, CONTROL OF THE BASIC ECONOMY OF AMERICAN MEDICINE WILL PASS COMPLETELY OUT OF THEIR HANDS.

The Blue Cross-Blue Shield movement is a giant laboratory experiment which will test whether our American society is capable of solving a complex social problem on a voluntary basis. It challenges physicians to exert medical and administrative leadership of the highest order.

Iowa will meet the challenge!

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

CEREBROVASCULAR DISEASE, by *James Peter Murphy*, M.D. (Chicago, The Year Book Publishers, 1954. \$12.00).

THE CONCEPT OF SCHIZOPHRENIA, by *W. F. McAuley*, M.D. (New York, Philosophical Library, Inc., 1954. \$3.75).

TEXTBOOK OF PEDIATRICS, Sixth Edition, by *Waldo E. Nelson*, M.D. (Philadelphia, W. B. Saunders Company, 1954. \$15.00).

THE 1954-55 YEAR BOOK OF MEDICINE, by *Paul B. Beeson*, M.D., *Carl Muschenheim*, M.D., *William B. Castle*, M.D., *Tinsley R. Harrison*, M.D., *Franz J. Ingelfinger*, M.D., and *Philip K. Bondy*, M.D. (Chicago, The Year Book Publishers, 1954. \$6.00).

BOOK REVIEWS

OFFICE GYNECOLOGY, by *J. P. Greenhill*, M.D., Sixth Edition (Chicago, The Yearbook Publishers, Inc., 1954. \$7.75).

The new edition of this standard treatise contains many new chapters including ones on examination of the breasts, culdoscopy, and other procedures usually included in a gynecologic examination. Many of the standard chapters have been extensively revised, particularly those dealing with sterility and pre-invasive carcinoma of the cervix.

This edition is exceptionally well illustrated, and many of the illustrations are new in this edition. Many of the minor surgical procedures which can be done in an office are thoroughly explained and very well illustrated.

This book is well known to all and can be heartily recommended to the general practitioner as well as to the gynecologist.—*H. Kirby Shiffler*, M.D.

HEART DISEASE AND INDUSTRY, by *Meyer Texton*, M.D. (New York, Grune & Stratton, 1954. \$7.50).

The rise in the number of industrial and other legal claims centering about disease of the heart has been a constant concern not only to the insurance carriers but to the physician. As Dr. Samuel A. Levine points out in a foreword to this work, the average physician shuns a court appearance because he finds himself unable to make a precise and unequivocal statement of cause and effect in some cardiac cases. Time relationships between exertion and myocardial infarction; what constitutes an accident from the legal point of view; the concept of aggravation of a pre-existing cardiac defect—these are among the problems considered in this book.

The bulk of this volume consists of a careful compilation of 100 consecutive workmen's compensation cases involving heart disease. The case reports are presented in detail, with notation of the particular problems illustrated by each case. Thus the reader is able to refer to illustrative case reports in which the problem of chest trauma, or rehabilitation, or premonitory symptoms, played a part.

As would be expected, most of the cases of heart

disease in this study are of the arteriosclerotic variety, characterized by angina pectoris and coronary thrombosis. Dr. Texton reaches the conclusion that in only the rarest of instances can a casual relation be established between effort and coronary thrombosis. He seeks to set up criteria by which a decision can be reached on this question in an individual case, and expresses the somewhat forlorn hope that "scientific facts will not be compromised to satisfy a legal interpretation."

This volume, hailed as the first comprehensive study of the cardiac case in industry, seems destined to be a valuable reference work not only for industrial physicians but for insurance and legal specialists as well.—*H. J. Smith*, M.D.

ILLUSTRATED REVIEW OF FRACTURE TREATMENT, by *Fredrick Lee Liebolt*, M.D. (Los Altos, Calif., Lange Medical Publications, 1954. \$4.00).

It would appear that the author has gone to some pains to embellish his notes with illustrations. Undoubtedly this type of material will appeal to medical students, particularly those who desire to review the treatment of fractures.—*E. M. George*, M.D.

FUNDAMENTALS OF ANESTHESIA, prepared under the Editorial Direction of the Consultant Committee for Revision of Fundamentals of Anesthesia, a publication of the Council on Pharmacy & Chemistry of the AMA, Third Edition (Philadelphia, W. B. Saunders Co., 1954. \$6.00).

This AMA publication is exactly what the name implies and is most certainly a complete and up-to-date story of the fundamentals of anesthesia. In outline form, it covers the field of anesthesiology from the standpoint of chemistry, physics, physiology and pharmacology. It describes the technical procedures of all agents and methods and the application of fundamental principles of anesthesia as they apply to patients.

This book will be valuable to the medical student and intern, it is almost a "must" for the resident in anesthesiology, and for the experienced anesthesiologist it can be a most valuable reference work.—*E. P. Lovejoy*, M.D.

ARTHRITIS AND RHEUMATISM, THE DISEASES AND THEIR TREATMENT, by *Charles L. Steinberg*, M.D., and five collaborators (New York, Springer, 1954. \$10.00).

This volume, prepared by a group of physicians from the Rochester General Hospital combines recent advances in the treatment of arthritis with a review of the basic physiology and pathology of this disease. Excellent bibliographies supplement the text, and frequent illustrations of good quality are presented. Every physician will find this book helpful in reviewing the advances made in the treatment of arthritis.—*E. M. George*, M.D.

STATE DEPARTMENT OF HEALTH


COMMISSIONER

POLIOMYELITIS IN IOWA

The following chart gives the number of cases of poliomyelitis reported in Iowa by month for the period January 1, 1952, through September 4, 1954. It also shows that Iowa will probably have well over 1,000 cases reported by the end of the year.

The 115 cases reported for the week ending September 4 are the highest for any one week of 1954 and may represent the peak week. Ninety-one of the 99 counties have reported the 716 cases to date (September 4).

	1952	1953	1954
January	1	7	1
February	3	5	9
March	2	2	4
April	4	4	7
May	6	14	5
June	47	21	26
July	340	59	223
August	1,260	248	326
September	1,034	123	115 (week Sept. 4)
October	664	69	
November	168	39	
December	35	22	
TOTALS	3,564	613	716 (as of Sept. 4, 1954)

VENEREAL DISEASE CONTINUES A SERIOUS PROBLEM

Syphilis continues to constitute a major public health problem in Iowa, in terms of numbers alone, as witnessed by the accompanying graph of cases reported since 1941. These cases are broken down by the four basic diagnostic stages.

A few years ago there was reason to believe that efforts at venereal disease control were well on the way toward reducing syphilis and gonorrhea to maintenance-control levels. Subsequent to the rise in venereal disease rates during and following the war years, there was a period of steady decline in the total number of syphilis cases reported and in the number of cases of early infectious syphilis (primary, secondary, and early latent). This trend in early infectious syphilis has continued through the past fiscal year. However, the total number of cases reported witnessed a sharp upturn during the past year, as more and more attention was devoted to seeking out and treating the older cases of latent syphilis in our

syphilis reservoir. In addition, the numbers of confirmed cases of primary and secondary syphilis reported during the months of June and July have also shown a decided increase.

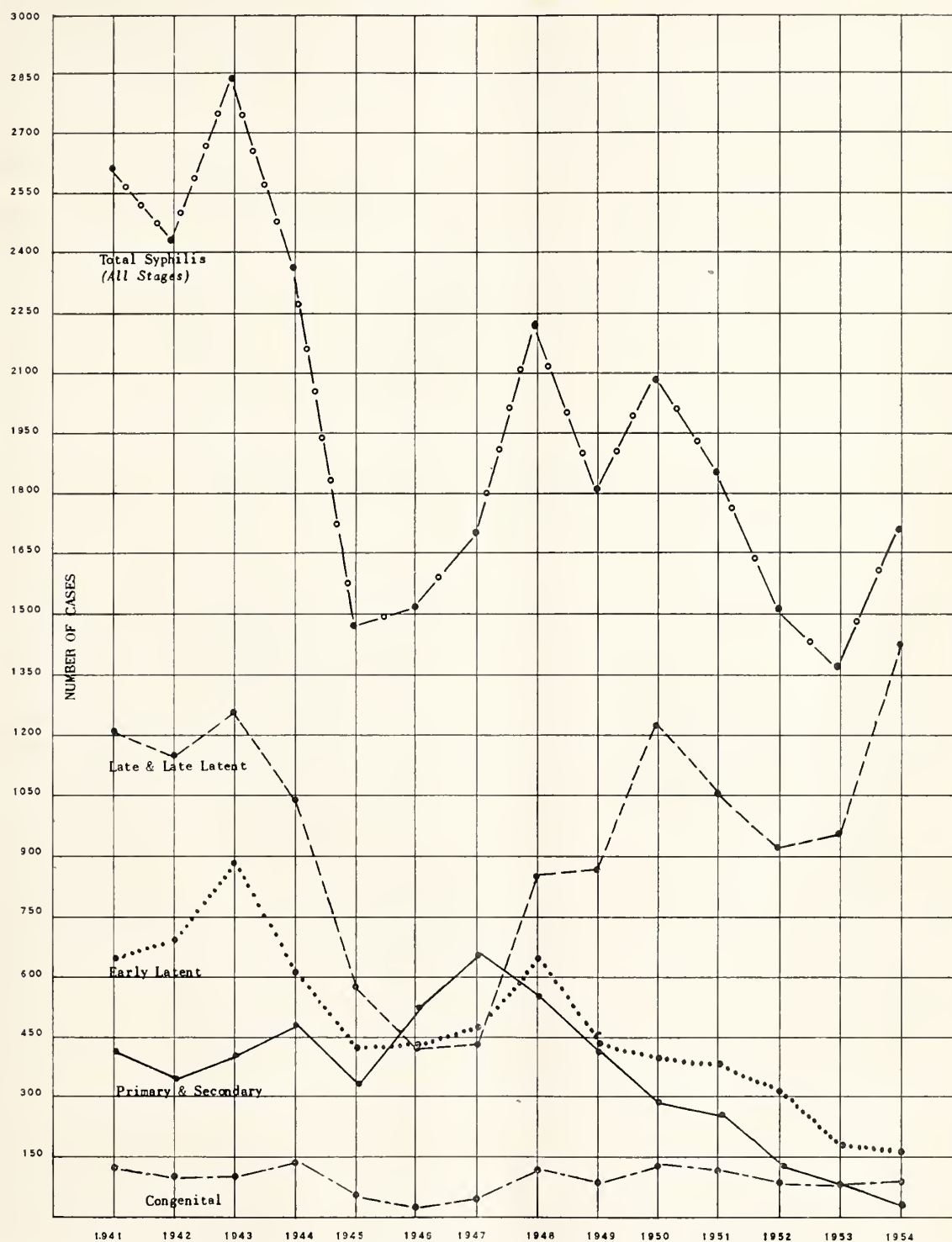
Gonorrhea incidence has meanwhile shown only a slight decrease during the past ten years. It is quite likely that this is not a true decline, but rather a slump in the reporting of cases. This let down in reporting is probably attributable to the developing of an attitude of complacency and unconcern as regards the dangers of the disease, on the part of both the lay public and the practicing profession. The development of this attitude has been a natural consequence of the ease of treatment and promptness of cure effected through the use of the antibiotics.

Although we know morbidity reporting is not complete, we have an indication of the relative volume of successful casefinding in the comparison of the number of cases of syphilis reported by public agencies with the number reported by private physicians. This ratio for syphilis is generally about two private physicians' cases per case reported by a public agency.

Long-term trends, quite apart from the effects of newer treatment methods, do appear to be in the direction of decreasing incidence for both syphilis and gonorrhea. However, *no infectious disease in the history of medicine has been eradicated or even partially controlled solely by the use of effective treatment of infected persons.* Antibiotics and rapid treatment in combination with casefinding, education, and study of incidence rates may eventually accomplish the job.

We would like to be able to present a preview or venture a prediction, based on present morbidity trends, as to what we might expect in venereal disease incidence and prevalence rates in the coming years. However, at the moment, the outlook is not too hopeful. Barring a moral renaissance, the reservoirs of venereal infection will remain in our population, and the method of transmission of the diseases will continue unaltered. Reductions in funds available for venereal disease control activities continue to curtail and limit our case-finding efforts, thus delaying the rates of declining incidence and the attainment of our ultimate goal of control. We may appear pessimistic, but we feel it may be accurately stated

CASES OF SYPHILIS REPORTED FROM ALL SOURCES — BY STAGE OF DISEASE Iowa: 1941-1954 Fiscal Years



that unless the present program of casefinding, diagnosis, and treatment is continued on its present high level, there is nothing to prevent venereal-disease rates from soaring to all-time highs. Such an occurrence would hardly be consistent

in a state that boasts one of the higher per-capita wealths and one of the lower degrees of illiteracy in the nation. In the face of such possible inconsistencies, one can only conclude with a question —WHY?

SEMI-ANNUAL REPORT OF TUBERCULOSIS FIELD PROGRAMS

January 1-July 1, 1954

A survey of 10 counties was conducted during the past six months. Every adult, 7th grade and over, was given an opportunity to have a chest x-ray. Sixty-three and two-tenths per cent of the eligible population participated in the program.

County surveys complete at the time of this report . . .	8
Number 70 mm. films taken	57,246
Number referred for large films	528
Number 14 x 17 films taken	478

Tuberculosis Found	Failed to Report	
Probably active.. 8	Deceased	3
Probably inactive 25	Too ill	12
Probably healed.. 86	Failed	17
Activity	Out of county	9
undetermined 39	Refused	5
	Private films	4
		158
Non-tuberculous findings (persons with 1 or more)		192
Healthy chests		128
Total		478

Because of a reduction in the total budget for the year beginning July 1, 1954, two mobile x-ray units are being retired. This means that fewer county-wide programs can be conducted in the coming year. It also means that with the remaining mobile units we must pinpoint work through special area studies to localities (industries, parts of cities, etc.) where the tuberculosis problem may be greatest.

Contact Case-Finding Programs

Through this service, persons who have had known or suspected contact with tuberculosis are tuberculin-tested and x-rayed. Twenty programs were scheduled for the period. Fourteen were completed as of June 6, 1954.

Tuberculosis Found	
Number 14 x 17 Chest Films Taken	973
Probably active	6
Probably inactive	33
Probably healed	188
Activity undetermined	33
	260
Non-tuberculous findings (persons with 1 or more) 185	
Healthy chests	528
Total	973

On known and suspected cases of tuberculosis, continuous follow-through is maintained by county and staff nurses under the direction of the private physician.

Special and Emergency Surveys

Twelve programs were conducted during the past 6 months. Ten thousand two hundred sixty-eight (70 mm) films taken. Subjects included students, school personnel, food handlers, bus drivers, county homes and communities.

Thirty-five miniature film findings requiring large films for further evaluation were referred locally for x-ray.

Fifty-nine (14 x 17) films taken by the mobile unit revealed 13 cases of inactive and/or healed tuberculosis and 17 tuberculosis suspects.

Non-tuberculous findings totaled 100. Healthy chests 6,774. An additional 274 bus drivers received large chest x-rays in connection with contact programs.

Analysis of 880 Non-Tuberculous Findings

County-Wide Program 400. Contact Program 380. Special Programs 100.

Thoracic Cage Anomaly	12
Bone Lesions	5
Pleural abnormality	132
Postoperative chest	38
Abnormal diaphragm	14
Calcified diffuse granulomatous lesions	51
Pneumonitis	28
Possible neoplasm	28
Hilar node calcification	104
Pneumothorax	6
Fibrosis—cause unknown	94
Inc. bronchovascular markings	14
Bronchiectasis suspect	18
Coin lesion	45
Atelectasis	31
Emphysema	28
Mediastinal mass	31
Abnormal aorta	18
Abnormal heart size/contour	105
Histioplasmosis suspect	4
Soft tissue abnormality	11
Total	880

I. Number cases tuberculosis reported for first time—January 1 to June 30, 1954 (physicians, hospitals, death certificates, other)	361
II. Number cases hospitalized	213
(not hospitalized or not stated)	148
III. Number cases probable tuberculosis found: County-Wide Programs 158. Contact Programs 260. Special Programs 13.	

Follow-through letters on probable cases of tuberculosis were sent to physicians for confirmation of diagnosis. Ninety-seven confirmations were received. (This figure is included in No. 1 above.)

Query letters were sent to physicians regarding disposition of suspected malignancies (neoplasm-mediastinal mass-coin lesions) found in all programs since January, 1954.

Reported for further study	46
Malignancies confirmed—surgically or previously known 7	
Number—surgery pending	5
Surgery not indicated	3
Benign lesions and/or no malignancy	20
Refused care	3

Total number 70 millimeter films taken	67,514
Total number 14 x 17 films taken	1,784
Total cases tuberculosis reported	361

HOW ABOUT YOU, DOCTOR?

Of the 2,500 doctors who attended the AAGP meeting in Cleveland, last March, 500 were x-rayed as a routine hospital admission exhibit sponsored by the National Tuberculosis Association, the U. S. Public Health Service and the American Hospital Association. Of the 22 who were recalled for further studies, ten had films suggestive of pulmonary tuberculosis; four were suspected of having cardiovascular disease; and eight were thought to have other pathologies.

DIABETES INSTITUTE

On Friday, November 5, 1954, an Institute on Diabetes will be conducted at University Hospitals, Iowa City, under the joint sponsorship of the College of Medicine, State University of Iowa, and the State Department of Health, Division of Gerontology, Heart and Chronic Disease. The program is to be as follows:

- 9:30 a.m. Registration
 10:00 a.m. Walter L. Bierring, M.D., presiding
 "Some Current Problems in Diabetes"
 Robert C. Hardin, M.D., professor of medicine at S.U.I. and governor for Iowa of the American Diabetes Association
 "Diet in Diabetes"
 Elizabeth Yearick, chief therapeutic dietician, University Hospitals
 "Pregnancy in Diabetes"
 William C. Keettel, M.D., professor of obstetrics and gynecology, S.U.I.
 12:30 p.m. Luncheon—University Hospitals
 2:00 p.m. Dr. Hardin presiding
 "Diabetic Neuropathy"
 Arthur G. Lueck, M.D., Des Moines
 "Experiments Related to Diabetic Retinopathy and Kimmelstiel-Wilson's Disease"
 Bernard Becker, M.D., professor of ophthalmology, Washington University, St. Louis, Mo.
 "Surgery in Diabetes"
 Sidney E. Ziffren, M.D., professor of surgery, S.U.I.
 "The Heart in Diabetes"
 William B. Bean, M.D., professor of medicine, S.U.I.
 6:00 p.m. Dinner—VA Hospital, Iowa City
 7:30 p.m. Dr. Hardin presiding
 "Office Treatment of Diabetes"
 Henry T. Ricketts, M.D., professor of medicine, University of Chicago, and member of the council, American Diabetes Association

TRENDS IN T-B HOSPITALIZATION

Drs. Abraham Gelperin and L. J. Galinsky, of Des Moines, together with Dr. R. J. Anderson and Mr. A. P. Iskrant of the U. S. Public Health Service, have published a study of trends in discharge and length of patient stay at the tuberculosis division of Broadlawns Polk County Hospital, in the August, 1954, issue of PUBLIC HEALTH REPORTS.

The review, covering the years 1946-1953, inclusive, shows an increase in the numbers of discharges "with advice" from 40 to 70 per cent, roughly, as distinguished from discharges as "dead" and as "against advice." The improvement was accomplished at the expense of a longer average hospitalization per patient, but the authors note that the average hospital stay appears to have reached a peak in 1949 and to be on the decline. Since 1951, a large proportion of patients discharged with advice have been placed on "home care," and, largely as a result of that technic, the period of hospitalization for cases discharged between July and October, 1953, was less than one-quarter that of patients discharged during 1951.

U OF M DEDICATES MAYO MEMORIAL BUILDING

A 14-story structure erected at a cost of \$20,000,000 as a memorial to the Drs. Mayo, of Rochester, is to be dedicated on October 21 and 22 on the Minneapolis campus of the University of Minnesota. It will house numerous units of the medical school, as well as several sections of University Hospitals, the original buildings of which it adjoins.

The speakers who are to have parts in the dedicatory program include Drs. A. C. Furstenburg, Dean of the Medical School and Chairman of the Department of Otolaryngology, University of Michigan; O. A. Brines, Professor of Pathology, Wayne University; F. H. Krusen, Professor of Physical Medicine and Rehabilitation, Mayo Clinic; J. Chassar Moir, Nuffield Professor of Obstetrics and Gynecology, Oxford; H. W. Woltman, Professor of Neurology and Psychiatry, Mayo Clinic; Jack Masur, Assistant Surgeon General, U.S.P.H.S.; W. H. Sebrell, Director, National Institutes of Health, U.S.P.H.S.; Charles A. Janeway, Professor of Pediatrics, Harvard; R. R. Newell, Professor of Medicine, Stanford; and L. A. Scheele, Surgeon General, U.S.P.H.S.

COOPERATIVELY PLANNED HOSPITAL CARE

The Office of Defense Mobilization has issued to hospital administrators a handbook entitled "Mobilizing Your Personnel Resources for Better Patient Care," the first of a series describing ways to increase the productivity of their personnel. The booklet suggests that each aspect of the institution's program be planned jointly by the people who will carry it out, and outlines means of developing leadership qualities in the staff. The Joint Commission on the Improvement of Patient Care, which cooperated with the governmental agency in the preparation of the handbook, consists of representatives of the AMA, the American Hospital Association, the American Nurses' Association and the National League for Nursing. Copies can be secured from the Government Printing Office for twenty-five cents each.

OMAHA MID-WEST CLINICAL CONFERENCE

The Twenty-Second Annual Clinical Assembly of the Omaha Mid-West Clinical Society will be held at the Hotel Paxton, Omaha, October 25-28, 1954. An outstanding group of guest speakers and Society members will present addresses, clinics and panel discussions, question-and-answer periods, motion pictures and scientific exhibits. The complete program will be available about October 1, from the Executive Secretary, 1031 Medical Arts Building, Omaha 2.

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Publications Chairman*, Dexter, Iowa

President—MRS. LESTER R. HEGG, Rock Valley

President-Elect—MRS. CHARLES H. FLYNN, 709 W. 15th Street, Clarinda

Secretary—MRS. ROBERT P. MASON, 5818 Chamberlain Drive, Des Moines 12

Treasurer—MRS. HOWARD H. SMEAD, 3333 Grand Avenue, Des Moines 12

LINES FROM THE PRESIDENT

It hardly seems possible that Autumn with its tapestry of colors is here. Its beauty re-awakens our belief in immortality, giving new life to our objectives and creating a challenge for us to do better Auxiliary work. Activity in the tremendously important field of HEALTH is indeed a privilege of Auxiliary members.

The theme of the National Conference of Auxiliary State Presidents and Presidents-Elect to be held in Chicago next month is "Leadership in Community Health." This conference is an annual affair, the purpose of which is to acquaint state leaders with the objectives of the national program and to facilitate their exchanging ideas concerning work being carried on all over the United States. No two states are alike, any more than our smaller communities are identical. Consequently, the national and state Auxiliary programs are set up to meet the needs of many, and it is wise for each community to select those activities which suit its requirements. In preparation for community health leadership, we must be organized to do effective work. Strength lies in unity. By continued payment of our dues, we can help to give strength to the Auxiliary and thereby help to maintain freedom of direction for doctors in ministering to the health needs of our nation.

Some new county Auxiliaries have all ready shown great accomplishment in the organization of Future Nurses Clubs. Fall is a good time to take the young girls through local hospitals. Make every occasion a festive one by means of teas, flash pictures, good publicity in local papers, and door prizes. Remember that a good money raising project for these Clubs is the selling of TODAY'S HEALTH. You may leave as much as 50 per cent of the subscription rate in your Future Nurses Club treasury, as long as sales of the magazine go through the Auxiliary and its members. This method of raising money has a double significance—the dissemination of authentic health information and support of activities for girls who may one day be nurses.

Have you planned to add to the State Auxiliary Nurses Loan Fund? At present we have four girls who are receiving loans: two seniors who expect to be graduated this fall—one in Palo

Alto and the other from Dallas County. We have a second-year nurse from Appanoose County, and our newest loan-fund girl is from Des Moines County. Do try to allocate as much as possible of your local budget to this fund, for we have several new applications for loans.

During the last year, the Committee on work for the Handicapped reported five sales held in the state from which 150 handicapped persons received benefit. A total of \$3,641 worth of merchandise was sold. These items included rugs, pillow slips, children's clothes, leather goods, stuffed toys and other products. It is gratifying to know that more and more handicapped persons are using the Auxiliary sponsored sales as a market for their hand-work. The Committee Chairman, Mrs. H. C. Merillat, Des Moines, has announced that sales for 1954 are already scheduled. We recommend that Auxiliaries planning to have sales notify neighboring counties so that results may be greatly increased.

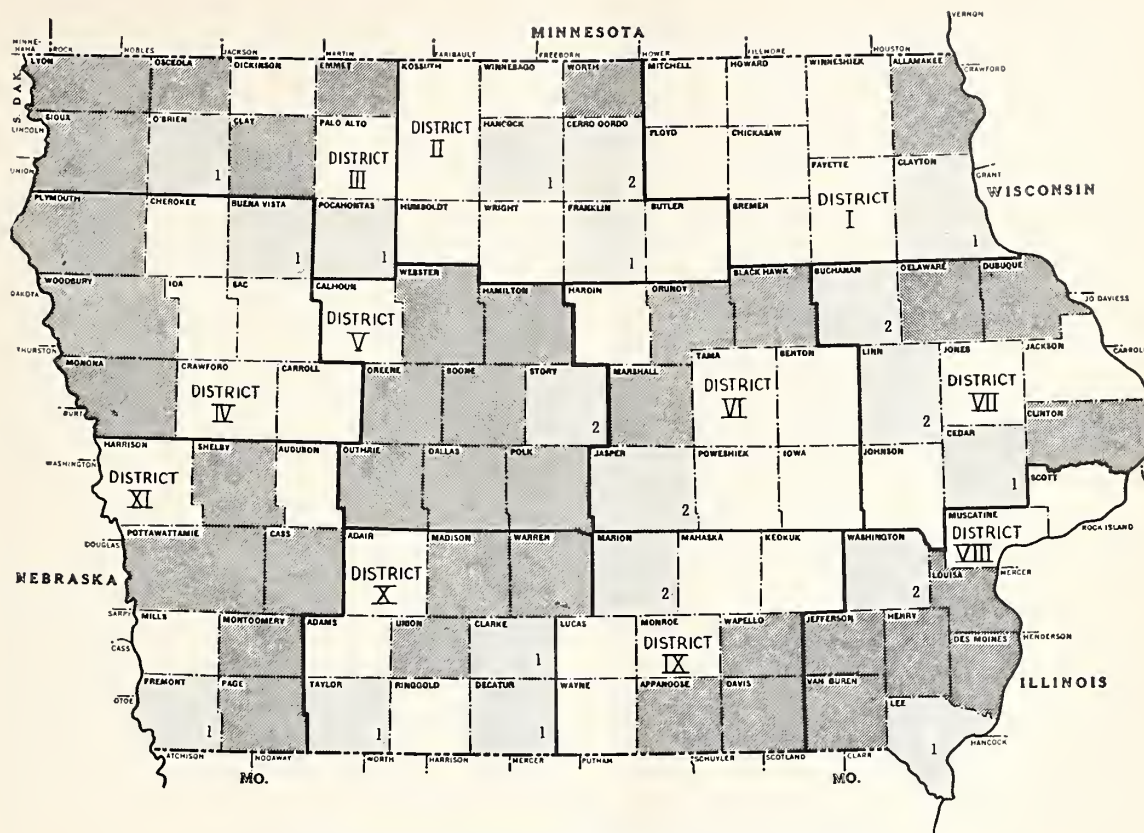
Repetition is the mother of study and learning. May I again urge you to report regularly to the Publications and to the Press and Publicity Chairmen of our State Auxiliary. Outstanding county meetings deserve plenty of "picture takers." Begin planning your entrance to the activity exhibit for the Annual Meeting now. We hope to have achievement awards in the future. Do read THE BULLETIN and the Iowa WOMAN'S AUXILIARY NEWS. These publications are a source of information which will help you and your Auxiliary to become better leaders in community health.

MRS. LESTER R. HEGG
President

CREDO FOR AN AUXILIARY

1. I am your opportunity as doctors' wives to be identified with the medical profession;
2. I support and interpret the ideas and ideals of the medical association;
3. I am an auxiliary and am not independent;
4. It's not my size; it's my influence that will make me live;
5. I am as wide as the vision of my membership;
6. I am your auxiliary; I am what you make me.

Wyoming Medical Auxiliary News
June 1954



COUNTIES PARTICIPATING IN IOWA AUXILIARY

The darker of the two shadings on this map indicates counties with organized Auxiliaries. The lighter shading marks the counties in which there are members-at-large, the small Arabic numbers showing how many.

The Auxiliary to the Iowa State Medical Society is growing, but a great deal of organizing still remains to be done. By this time next year, let's be able to shade every county on this map!

EVERY DOCTOR'S WIFE A FULL PARTNER

To be a full partner in her husband's and her chosen work, it is essential for every doctor's wife to become a member of her county and state Auxiliary.

The Auxiliary needs her and she needs the Auxiliary.

In unity there is strength, and in strength there is power to carry on the good works and deeds of a noble profession that will live on long after us.

To be an active member of your Auxiliary is a privilege, not a duty.

GOALS—Every Iowa County Organized by 1955

Ten per cent increase for Iowa Membership

SLOGAN—Be a Full Partner

Iowa Statistics:

97 Medical Societies

39 Organized Auxiliaries

60 Unorganized Counties

21 Counties with Members-at-Large

39 Counties with no members

850 Total Auxiliary Memberships

A good Auxiliary is an active Auxiliary.

Years of participation in Auxiliary does not give us a one way ticket to *deadhead*.

Your state president, organization chairman and your councilors are waiting to help you. Please call on any one of us or all of us at any time. All officers' names and addresses are listed in the Year Book for your convenience.

JANE KING (Mrs. Dean H.)
Chairman, Organization

THE PRESIDENT REPRESENTS AUXILIARY

Mrs. Lester R. Hegg, President of the State Auxiliary, attended the Sixth Annual Health Education Workshop at Iowa State College, Ames, July 14-16. She was chairman of one panel discussion and toastmistress at the July 14 evening meeting. A large group of professional organizations and lay organizations with health programs participate in these workshops, the purpose of which is "to demonstrate how community health problems can be solved through health education methods." Mental health, nutrition, health education methods and health legislation provided the bases of discussion.

SPEAKERS' BUREAU SCHEDULES

RADIO

WOI—Ames, Iowa
Thursday at 11:15 a.m.
"MUSIC WITH YOUR MEALS"

- October 7 The Evening Meal
October 14 Eating Between Meals
October 21 Psychology of Eating
October 28 Special Diets

WSUI—Iowa City, Iowa
Tuesday at 11:45 a.m.
"TRAIN UP A CHILD"

- October 5 Discipline Is Not a Bad Word
October 12 The Child and Money
October 19 Unusual Behavior and
Physical Defects
October 26 Phantasies and Fibs

TELEVISION

WOI-TV—Ames, Iowa
Friday at 9:30 p.m.

- October 1 So You're Going to Have
an Operation
October 8 What Does the Pathologist Do?
October 15 How Are Anesthetics Given?

- October 22 .. Dentistry (in cooperation with the
Iowa State Dental Society)
October 29 .. What to Do in Case of Emergency

MRS. COFFIN REPRESENTS AUXILIARY

Dr. and Mrs. L. A. Coffin represented the Iowa State Medical Society and Auxiliary at the state-sponsored eightieth birthday celebration of America's thirty-first President, Herbert C. Hoover, at West Branch, Iowa August 10, 1954.

There were senators, congressmen, governors, former governors, admirals, generals, business and industrial magnates present. Mr. Hoover received enthusiastic and affectionate homage from Iowans and the visitors. Few men in our country's history have been privileged to serve our nation in so many important capacities.

MODEL NURSING-HOME ORDINANCE REVISED

The National Board of Fire Underwriters has announced publication of a new edition of its "Suggested Ordinance on Nursing, Convalescent and Old Age Homes." The revision brings up to date the suggested ordinance first drawn up in 1945. Copies can be secured from the Board, 85 John Street, New York City 38.

Today's Health Subscription Contest

Woman's Auxiliary to the AMA
July 1, 1954, to April 30, 1955 (midnight)

PRIZES: The sum of \$480.00 will be divided among five groups as follows:

First prize \$40.00, second prize \$25.00, and third prize \$15.00 for county groups.

Group 1. Auxiliaries with a membership of 1 to 18.

Group 2. Auxiliaries with a membership of 19 to 35.

Group 3. Auxiliaries with a membership of 36 to 99.

Group 4. Auxiliaries with a membership of 100 or over.

First prize \$40.00 for State (computed on basis of membership).

The more subscriptions the more points:

One-year subscription—one point.

A two-year subscription—two points.

A three-year subscription—three points.

A four-year subscription—four points.

A six-months subscription—one-half point. Subscriptions may be mailed directly to:

TODAY'S HEALTH Magazine
American Medical Association
535 North Dearborn Street
Chicago 10, Illinois

(Auxiliaries in Group 1 counties must have at least 25 points to qualify for a cash prize. Credit cannot apply to orders sent through a magazine subscription agency.)

REMEMBER—

The Medical Auxiliary remits to the Chicago Office of TODAY'S HEALTH only on the basis of the 50 per cent rates.

All commissions earned by the local Auxiliary on any regular rate subscriptions are to be used by the local Auxiliary in any way it chooses.

Regular Rates	Orders from Schools and Laity	Orders from Auxiliary Members, Physicians and Dentists
1 year \$3.00	Collect \$3.00—Remit \$1.50	Collect \$1.50—Remit \$1.50
2 years \$5.00	Collect \$5.00—Remit \$2.50	Collect \$2.50—Remit \$2.50
3 years \$6.50	Collect \$6.50—Remit \$3.25	Collect \$3.25—Remit \$3.25
4 years \$8.00	Collect \$8.00—Remit \$4.00	Collect \$4.00—Remit \$4.00 (Doctors' choice)
6 months \$1.60	Collect \$1.60—Remit \$.80	Collect \$.80—Remit \$.80

ORGANIZING A WEIGHT CONTROL PROJECT

Today there is a great mass of knowledge regarding obesity and its effect on health and disease. The need for application of this knowledge is evidenced in millions of persons in the United States who are overweight. An estimated 30,000,000 of these are 10 per cent overweight, and another 15,000,000 are 20 per cent or more heavier than they should be.

Many of these people find it difficult to lose weight successfully. Some do manage to lose it, but cannot maintain the weight loss. Some overweight persons have found it helpful to attend classes on weight control for the following reasons: such class-meetings stimulate self-assurance in tackling a diet, provide encouragement usually absent in the home and social setting, nurture a sense of accomplishment, provide a new framework within which change is promoted for each person, and allow for inter-personal reactions.

In the weight-control study sponsored by the Louisville Nutrition Committee at Louisville, Kentucky, 86.1 per cent of the participants lost weight in significant amounts; 2.5 per cent maintained their initial weight; and one person gained weight. An attempt was made to check this group at the end of 26 weeks. Only 20 per cent of the group could be checked at that time but 79 per cent of those had lost weight, and the average loss per person was 11 pounds.

About 200 overweight persons were observed over a period of time in an attempt to evaluate their response to a group environment set up to help them adhere to the limitations of a reduction diet at Herrick Memorial Hospital, in Berkeley, California. This study showed that application of group methods to the problem of weight reduction is effective in bringing about satisfactory weight loss for a majority of participants.

Other studies have also shown that overweight people achieve a more significant weight loss when they meet as a group, than when they attempt weight reduction by themselves.

There is interest in the group approach to weight control in Iowa. The Nutrition Service of the State Department of Health will give assistance in organizing groups after certain standards are met. The project must be approved by the local county medical society. Each participant must obtain a certificate of approval from his physician. The leader is required to have formal training in foods and nutrition and so may be a doctor, nurse, dietitian, or home-economics graduate. An outline is available to such a leader to use as a guide for a series of classes to give nutrition information, rather than help people to meet emotional needs.

The objectives in such a community program on weight control are as follows: to convince men and women that overweight is a health problem which affects life expectancy as well as personal well being, to urge those whose weight is above

normal to see a physician before embarking on a reducing program, to point out the many advantages of reaching and maintaining normal weight, to emphasize that reducing safely takes time and requires the establishment of permanent new eating habits so that weight will remain normal, to remind people that every diet should include adequate amounts of essential foods, and to encourage those whose weight is normal to watch it and keep it so.

Medical doctors have assisted with organizing and teaching these classes. Some have referred patients to the classes.

Write to the Nutrition Service, Iowa State Department of Health, State Office Building, Des Moines, Iowa, for further information about a weight control project.

CANCER SOCIETY GRANTS FUNDS TO S.U.I.

The State University of Iowa received a \$15,000 institutional grant for the year beginning September 1, 1954, from the American Cancer Society. The allocation for the previous year was \$10,000. The sum will finance various studies, including research concerning "an enzyme in fluids from the male sex glands which is believed responsible for spreading of cancer from its original site," concerning the chemical nature of other enzymes, and concerning chemical systems involved in tissue grown in laboratory cultures.

P. J. Leinfelder, M.D., professor of ophthalmology at the university, was given \$6,500 for a ten-month period beginning September 1, to study the effects of altered metabolism on the growth and function of cells in culture.

These two new allocations raise to \$42,500 the amount of aid given to cancer research at S.U.I. and Iowa State College thus far this year by the national organization. In addition, the Iowa Division has made \$51,566 available during the same period.

TENTATIVE APPROVAL FOR BLOOD FOUNDATION

Both the American Association of Blood Banks and the American Society of Clinical Pathologists have given "approval in principle" to a plan to establish a nationwide blood-collecting, storing, and distributing system, based on the clearing-house plan used by banks to exchange money and credit. Both groups acted at their meetings in Washington, D. C., and the AMA has also given its approval.

Under the system, a blood "deposit" could be made anywhere in the country and credited to an individual in another locality.

SOCIETY PROCEEDINGS

MEETINGS

Black Hawk

Dr. Hamlin Mattson, associate professor of surgery at the University of Minnesota, was guest speaker at the September 21 meeting of the Black Hawk County Medical Society. His topic was "Hernia."

Linn

A clinical professor of surgery at Western Reserve University, Cleveland, Dr. Donald M. Glover, spoke on "Urgent Surgery of Infancy and Childhood" at the September 5 meeting of the Linn County Medical Society. Drs. Morgan J. Foster and Clyde B. Meffert, of Cedar Rapids, were the discussants.

Polk

On September 24, the Polk County Medical Society held its fall party. At the first scientific session of the season, to be held on October 20 at the Savery Hotel, Dr. John S. DeTar, of Milan, Michigan, speaker of the Congress of Delegates of the American Academy of General Practice, will speak on "Problems Facing Family Physicians."

Scott

Dr. Tague C. Chisholm, of Minneapolis, addressed the September 7 meeting of the Scott County Medical Society on "Emergency Surgery in Infants." Dr. Chisholm is a clinical assistant professor at the University of Minnesota and limits his practice to pediatric surgery.

Webster

Torrential downpours failed to spoil the second annual picnic of the Webster County Medical Society and its Auxiliary on August 21, at Dr. Emerson Dawson's river cabin.

Woodbury

At the September 16 meeting of the Woodbury County Medical Society, at the Mayfair Hotel in Sioux City, Dr. Charles Read, assistant professor of pediatrics at the S.U.I. College of Medicine, spoke on "Babies of Diabetic Mothers."

DEATHS

Dr. Frank W. Cowgill, 72, who practiced medicine for many years in Zearing and Nevada, died, during the last week in August, at Altadena, California. He had been in ill health since suffering a stroke in 1947.

Dr. Arthur Alphonse Garside, 58, Davenport physician and surgeon, died on August 26, of myocardial infarction. He was a founder of the Central Clinic, and was president of the Scott County Medical Society in 1945.

Dr. Dennis F. Fitzpatrick, 78, a Life Member of the Iowa State Medical Society, died in his office in Iowa City, on August 26, following a heart attack.

Dr. Edward Burrson Williams, 85, a physician at Montezuma since 1899, died on August 15 at his home there. He was a Life Member of the Iowa State Medical Society.

Dr. Frank H. Creamer, 68, of Boone, a Life Member of the Iowa State Medical Society, died at the Veterans Administration Hospital in Iowa City on August 14, after a lingering illness. He practiced 42 years in Dupree, South Dakota, and had been in retirement since his return to Iowa.

Dr. Otis Rudolph Wolfe, 69, of Marshalltown, a specialist in the surgery of cataracts in children, died on September 11 at Rochester, Minnesota.

WEBSTER COUNTY POSTGRADUATE COURSE

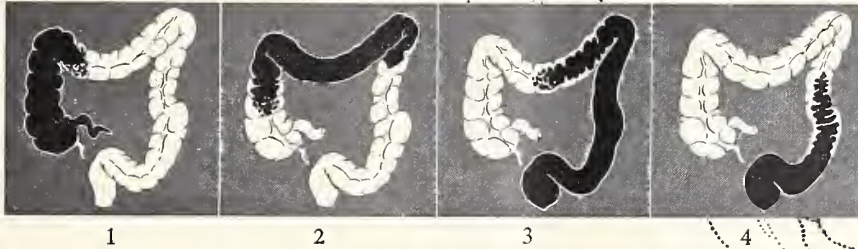
Sessions of the Webster County Medical Society's postgraduate course will be held on October 6 and 20, at the Warden Hotel, in Ft. Dodge.

On the first of those dates, Drs. J. W. Culbertson, J. W. Eckstein and J. E. Odell, of the S.U.I. College of Medicine, will compose a panel for the discussion of Rheumatic Fever in Children.

On the second date, Dr. S. C. Cullen, of the S.U.I. College of Medicine, will speak on Anesthesia Emergencies.

Roentgenographic pattern of colon mass propulsion.¹

- (1) Ascending colon filled.
- (2) Unsegmented mass propelled through transverse colon.
- (3) Propulsive force follows mass through descending colon.
- (4) Pelvic colon reservoir filled.



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Correction of constipation logically, therefore, lies in the suitable adjustment of these factors. The characteristics of Metamucil permit the correction of most of these factors: it provides bulk; it demands adequate intake of fluids (one glass with Metamucil powder, one glass

after each dose); it increases the physiologic demand to evacuate; and it does not establish a laxative "habit." Metamucil, in addition, is inert, and also nonirritating and nonallergenic.

Dosage Considerations

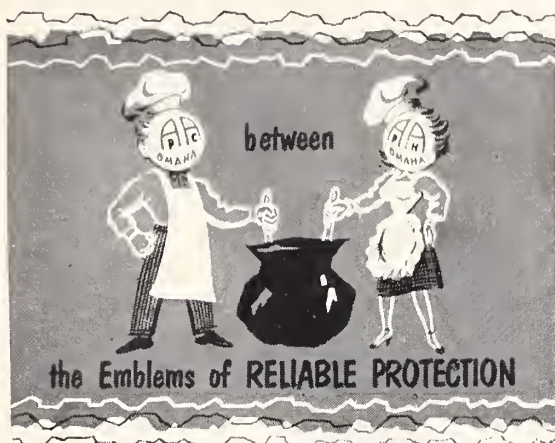
The average adult dose is one rounded teaspoonful of Metamucil powder in a glass of cool water, milk or fruit juice, followed by an additional glass of fluid if indicated.

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1. Best, C. H., and Taylor, N. B.: *The Physiological Basis of Medical Practice: A Text in Applied Physiology*, ed. 5, Baltimore, The Williams & Wilkins Company, 1950, pp. 579-583.

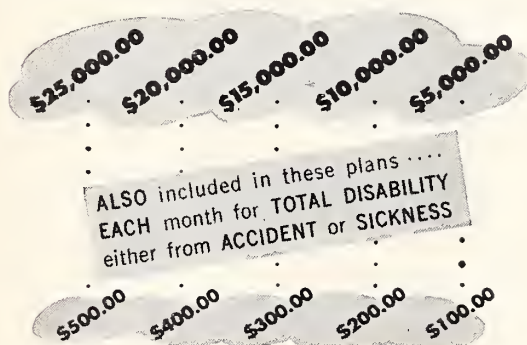
2. Bagen, J. A.: *A Method of Improving Function of the Bowel*, *Gastroenterology* 13:275 (Oct.) 1949.

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The Month in Washington

Washington, D. C.—When the 84th Congress convenes in January, the Eisenhower Administration will press for passage of at least two bills that failed to get through last session, reinsurance and a new program of medical care for military dependents. The former was decisively defeated in the House. The latter did not reach a vote in either chamber.

In a radio address summing up his Administration's legislative achievements, Mr. Eisenhower confirmed that he was prepared to renew the fight next session to have the federal government set up a system for reinsuring health insurance programs. He declared: "Health reinsurance we are going to put before Congress again because we must have a means open to every American family so that they can insure themselves cheaply against the possibility of catastrophe in the medical line."

There have been no indications how far the Administration would go in amending the reinsurance bill to satisfy its critics. It is possible also that if all objectionable features were removed there would be little left of the bill.

At Senate and House hearings, reinsurance was roundly denounced by most witnesses, for a variety of reasons. AMA's position was that reinsurance wasn't needed because private funds are available for the limited amount of reinsurance that could be used, and that in addition the program projected the federal government too far in the direction of control of medical care.

Later in the session, Mr. Eisenhower himself and Mrs. Hobby made every effort to win over critics of reinsurance, and to force the bill through Congress. In the light of these efforts—including a nationwide radio appeal by Mrs. Hobby—the defeat of the bill in the House of Representatives was regarded as one of the most surprising suffered by the Administration on any domestic legislation.

Currently Secretary Hobby and Chairman Charles Wolverton of the House Interstate and Foreign Commerce Committee are attempting to bring together all parties interested in health legislation to see if a compromise can be worked out on reinsurance.

Although the dependent medical care bill wasn't passed, this fact was not in any way regarded as a defeat for Mr. Eisenhower. The bill was offered in the Senate in plenty of time for action, but the introduction of the House bill was held up until Defense Department could estimate the first year's cost, eventually set at \$67 million. At any rate, neither Senate nor House Armed Services Committee held hearings on the measure.

In another statement, Mr. Eisenhower made it clear that he expects the next Congress to do

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References: 1. Hollander, F.: Arch. Int. Med. 93:107 (Jan.) 1954
2. Deutsch, E.: Scientific Exhibit, Gastroscopy, Interim Session A.M.A., St. Louis, December, 1953



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Surgical Technic, Surgical Anatomy & Clinical Surgery, Four Weeks, October 11

Surgical Anatomy & Clinical Surgery, Two Weeks, October 25

Surgery of Colon & Rectum, One Week, October 25

Breast & Thyroid Surgery, One Week, October 25

Thoracic Surgery, One Week, October 11

Esophageal Surgery, One Week, October 4

General Surgery, One Week or Two Weeks, October 4

Gallbladder Surgery, Ten Hours, October 25

Fractures & Traumatic Surgery, Two Weeks, October 25

GYNECOLOGY—Office & Operative Gynecology, Two Weeks, October 18

Vaginal Approach to Pelvic Surgery, One Week, November 1

OBSTETRICS—General & Surgical Obstetrics, Two Weeks, November 1

MEDICINE—Electrocardiography & Heart Disease, Two Weeks, October 11

Gastroenterology, Two Weeks, October 25

Gastroscopy, Two Weeks, November 8

RADIOLOGY—Diagnostic Course, Two Weeks, October 4

Clinical Uses of Radio Isotopes, Two Weeks, October 4

PEDIATRICS—Clinical Course, Two Weeks, by appointment

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Two Weeks, October 11

DERMATOLOGY—Intensive Course, Two Weeks, October 18

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something about improving and making more uniform the system of medical care for servicemen's families. Congress, he said, "must eventually meet certain imperative needs of the members of the armed forces." He explained that servicemen now "lack adequate medical care for dependents. . . . It is most important that these needs of the armed forces personnel serving their country often in remote corners of the world engage our serious consideration."

Although the American Medical Association has not had an opportunity to testify on the dependent care plan before Congressional committees, it has made its views known to the Defense Department. In general the AMA is not opposed to Defense Department proposals that a more uniform system be worked out, and that the federal government bear most of the cost. On one important point, however, the recommendations of the Department and of the Association are in direct conflict: The Department would have the military medical departments themselves furnish dependent medical care wherever they could, with service families going to private physicians and private hospitals only where the uniformed physician couldn't handle them. The Association, on the other hand, proposes that dependents be cared for by the military medical departments only where civilian medical facilities are inadequate to furnish proper care.

Federal officials, meanwhile, are busy preparing to put into effect the new health bills passed by Congress. Basic state allotment percentages have been worked out for the new Hill-Burton program (for facilities other than complete hospitals) and for the expanded vocational rehabilitation program. The Internal Revenue Bureau is about to issue detailed instructions to taxpayers regarding changes in medical-expense deductions and other benefits in the new tax law.

ARTHRITIS RESEARCH FELLOWSHIPS

The Arthritis and Rheumatism Foundation, 23 West 45th Street, New York City 36, is offering postdoctoral fellowships ranging from \$4,000 to \$6,000 per year and senior fellowships for experienced investigators paying from \$6,000 to \$7,500 per year, in the basic sciences related to arthritis. The deadline for applications is October 15, and awards will be made in January.

UROLOGY PRIZE

The American Urological Association, 1120 North Charles Street, Baltimore 1, offers prizes of \$500, \$300 and \$200 for essays on the result of clinical or laboratory research in urology. Competition is limited to urologists who have been graduated no more than ten years and to men in training to become urologists. The deadline is January 1.



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PERSONALS

Dr. H. N. Boden, who has practiced for eight years or more at Osceola, left, early in August, for Santa Ana, California. His principal reason for moving was his wife's ill health.

Dr. Cyril J. Ryan moved his practice from Creston to Clinton early in August.

On August 16, **Dr. Richard A. Hastings**, Ottumwa radiologist, reported for Navy service at Great Lakes Naval Training Station. He has been an associate of **Dr. S. F. Singer**.

After 35 years of practice in Centerville, **Dr. W. E. West**, an EENT specialist, closed his office on August 1.

Dr. Dexter H. Hake, a 1953 graduate of the College of Medicine at S.U.I., has joined the Mater Clinic, at Knoxville. He interned, this past year, at Keifer Maternity Hospital, in Detroit.

Dr. G. M. Edvenson has associated himself with **Dr. A. W. Burgess** at Iowa Falls. He is a graduate of the College of Medicine at S.U.I., and recently completed a three-year surgical residency at Augustana Hospital, in Chicago.

Dr. Dale Udem has joined **Drs. D. F. Rodawig** and **P. A. Scott** in practice at Spirit Lake. Since his graduation from the S.U.I. College of Medicine, in 1953, Dr. Udem has interned at the Good Samaritan Hospital, Portland, Oregon.

Dr. Lowell J. Peck, a graduate of the College of Medicine at S.U.I. who interned at Tripler General Hospital, in Honolulu, has joined **Dr. W. K. Kienzle** in practice at Wellsburg.

Dr. E. R. Leonard began practice in Fontanelle on September 1. He is a graduate of the medical school at the University of Nebraska and practiced in northwest Iowa until six years ago, when he began work for the Veterans Administration. In government employment he has been stationed at Boise, Idaho, and Medford, Oregon.

After a short time in Marengo, **Dr. Edmund A. Conoan** has begun practice at Dow City. A 1953 graduate of the medical school at Creighton University, he interned at St. Catherine's Hospital, in Omaha.

Dr. William D. Paul, professor of internal medicine at S.U.I., read a paper on "Temperature and Blood Flow Studies After Ultrasonic Irradiation" at the American Institute on Ultrasonics in Medicine, September 4.

Dr. Wm. J. Morrissey is vice-president and secretary of a corporation that is to build a clinic that will house 16 or more physicians and dentists at 39th and Ingersoll, in Des Moines. Construction was scheduled to start on October 1.

Dr. C. C. Moore, of Emmetsburg, began solo practice there on September 1.

Early in September, **Drs. Everett** and **Eunice Christensen**, of Spencer, moved into a new office building that had been constructed for them.

Dr. Curtis W. Rainy, who has served a general-practice residency at St. Luke's Hospital, in Cedar Rapids, during the past year, has announced his intention of setting up practice in Elma. He received his M.D. degree at Vanderbilt University, interned at Fitzsimons General Hospital, in Denver, and, subsequently, served a tour of duty in the Army, part of the time in Korea.

On September 6, **Dr. Bernard R. Goldman** joined **Dr. Cecil M. Zukerman** in the practice of internal medicine at Davenport. He is a graduate of the medical school of the University of Illinois, and did his internship and a residency in his specialty at Cook County Hospital, Chicago. Since 1952, he has served in the Air Force.

Drs. John Eisenach and **Richard Bunting**, graduates of the medical school at the University of Nebraska, have opened offices in Shenandoah.

On September 23, **Dr. Richard T. Day** closed his office in Hampton to enter upon a two-year term



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of service with the Air Force. He will report to the school of aviation medicine at Randolph Air Base, San Antonio, Texas. **Dr. Anthony P. Smith** is moving from Waucoma to Hampton to replace Dr. Day.

Drs. F. O. W. Voigt and **Joseph Lederman**, of Oskaloosa, have terminated their association and henceforth will practice independently.

Dr. Arthur Steindler, of Iowa City, was elected one of nine vice-presidents of the U. S. section of the International College of Surgeons, in Chicago on September 6.

Three papers developed by **Dr. Wm. D. Paul**, **Dr. Carrol Larson**, **Dr. Michael Bonfiglio**, **Dr. C. E. Radcliffe** and other members of the staff at University Hospitals were parts of the program at the meeting of the American Congress of Physical Medicine, in Washington, D. C., early in September. In addition, the program included an exhibit on "Physical Therapy in Dermatology" prepared by Drs. Radcliffe and Paul, and Dr. Paul, who has been president-elect of the organization during the past year, was installed as president.

Dr. Donald Taylor, of Lincoln, Nebraska, opened an office for the practice of medicine in Stuart, on September 15. He is a graduate of the University of Nebraska and completed his internship at Seaside Memorial Hospital, in Long Beach, California.

Dr. Lester R. Hegg was named Man of the Year at Rock Valley's Pioneer Day festival on August 19. He was the first man ever to receive such an honor there.

Following his separation from active duty as a lieutenant in the naval reserve, **Dr. W. G. Kuehn** has announced the reopening of his practice in Clarinda.

In September, **Dr. Sidney Smith** became associated with **Dr. Robert M. Cullison**, in Oskaloosa. Dr. Smith graduated from the S.U.I. College of Medicine in 1953 and served his internship at the Sacramento County Hospital, in Sacramento, California.

Dr. R. C. Larimer has returned to Sioux City following his service as a captain in the Army Medical Corps in Trieste and Austria. He plans shortly to enter practice with his father, **Dr. R. N. Larimer**, there.



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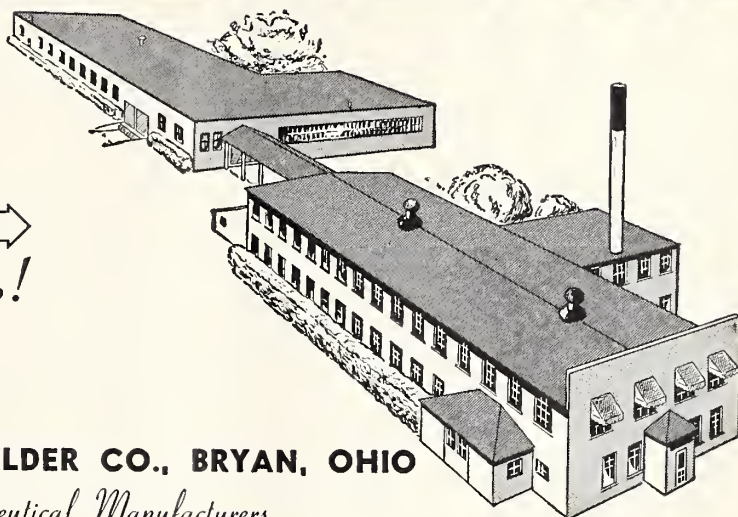
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Dr. John R. Walker, back from two years' service with the Navy, has rejoined Drs. James R. Thompson, Edward L. Rohlf, Jr., William C. Drier and Robert A. Weybrauch, at Waterloo. The group has been further enlarged by the association of Dr. Edward Johnston, who has just completed a four-year fellowship in general surgery at the Mayo Clinic. Dr. Johnston is a graduate of the medical school at Northwestern University, and following two years as a naval flight surgeon, he returned there to earn an M.S. degree in surgical anatomy.

Dr. C. L. Updegraff began his 42nd year of practice as an EENT specialist in Boone, on August 15.

Dr. John J. Gleeson, of Vail, reported to the Great Lakes Naval Training Center on August 30, for a term of active duty.

Dr. Franklin H. Top, head of the Department of Hygiene and Preventive Medicine at S.U.I., spoke on "Poliomyelitis," Dr. Carrol B. Larson, head of the Department of Orthopedics there, spoke on "Hip Arthroplasty," and Dr. A. L. Sabs, head of the University Hospitals Department of Neurology, spoke on "Diagnosis and Treatment of Meningitis," at the summer meeting of the Upper Des Moines Valley Medical Society, on August 5. About seventy people, including the wives of doctors, attended the gathering. Dr. E. K. Vaubel, of Estherville, is president of the organization; Dr. Thomas L. Ward, of Arnolds Park, is vice-president; and Dr. Ruth F. Wolcott, of Spirit Lake, is secretary-treasurer.

In reporting that Dr. Marvin H. Dubansky had opened an orthopedic practice in Des Moines, THE JOURNAL omitted mention of the fact that he recently completed a three-year residency in his specialty at S.U.I. and has completed Part I of his boards.

Drs. Arthur S. Perley and Maurice Wicklund, Waterloo radiologists, have opened a new office in the Medical Arts Building there. They intend to continue practicing in the Black Building, as well.

Dr. Erling Larson, Jr., formerly a resident in medicine at Veterans Hospital, Des Moines, and soon to be released from active duty as a lieutenant (M.C.), U.S.N.R., plans to enter the private practice of internal medicine in Davenport, in association with Drs. H. M. Hurevitz and Edward Motto.

NOT ARTHRITIS BUT ARTHRALGIA...

If the patient complaining of aching joints is a woman between 37 and 54 years of age, it is highly possible that she is suffering from arthralgia rather than arthritis.¹ It has been estimated that arthralgia occurs in about 40 per cent of women with estrogen deficiency, and is exceeded in frequency only by symptoms of emotional or vasomotor origin.² In fact, arthralgia may be as indicative of declining ovarian function as the classic menopausal hot flushes.

Arthralgia, however, is just one of a vast number of distressing but ill-defined symptoms that may be precipitated by the loss of estrogen as a "metabolic regulator." Other good examples are insomnia, headache, easy fatigability, and tachypnea.

Because these symptoms sometimes occur years before or even long after cessation of menstruation, they are not always readily associated with estrogen deficiency, and the tendency may be to treat them with medications other than estrogen. Obviously, sedatives and other palliatives cannot be expected to produce a satisfactory response if an estrogen deficiency exists. Only estrogen replacement therapy will correct the basic cause of the disorder.

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1. Greenblatt, R. B., and Kupperman, H. S.: *M. Clin. North America* 30:576 (May) 1946. 2. McGavack, T. H., in Goldzieher, M. A., and Goldzieher, J. W.: *Endocrine Treatment in General Practice*, New York, Springer Publishing Company, Inc., 1953, p. 225.

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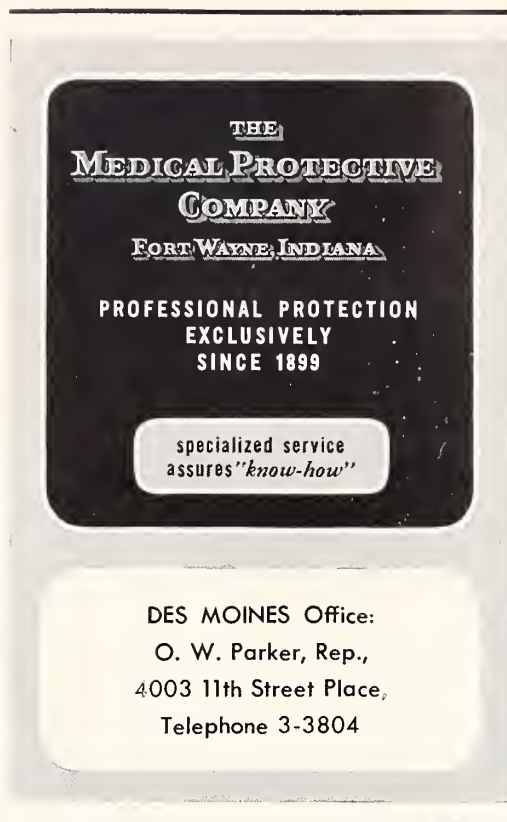
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Dr. Everett A. Nitzke, a 1950 graduate of the College of Medicine at S.U.I., has recently moved to Des Moines from Detroit, Michigan, and is preparing to open an office for the practice of pediatrics near 37th and Ingersoll.

Dr. Edward A. Hanske, formerly a resident in pathology at Mercy Hospital, Des Moines, and more recently chief of the Laboratory Service at the U. S. Army Hospital at Camp Gordon, will relieve Dr. F. D. Winter, of Burlington, who is scheduled shortly to enter military service.

Dr. Abraham G. Fleischman, of Des Moines, left for Israel on July 29, to lecture on "Urinary Lithiasis—Medical and Surgical Management" before the Israel Urological Society, at Tel Aviv, and at the Hadassah Hebrew Medical School, in Jerusalem.

On September 1, Dr. Arnold Rustin opened an office for the practice of urology in Portland, Oregon. Dr. Rustin, a 1950 graduate of the S.U.I. College of Medicine, just completed a three-year residency in his specialty at Iowa City.

Dr. Jose Romero Ruiz, a 1950 graduate of the medical school at the University of Havana, has entered general practice in Des Moines with Dr. James Skultety. He interned at Mercy Hospital, Des Moines, and subsequently served as a resident there.

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SMOKE GETS IN YOUR NEWS

Cigarette smokers needn't renounce their favorite weed because of the controversy over lung cancer. Dr. Ralph Gancher, of Oakland, California, says he has a better idea—"a plan that will enable us to solve our problem as we go on smoking."

In an article appropriately called "Cancer, Schmancer," he proposes that cigarette buyers be given premium coupons with each purchase. The coupons would entitle the happy smoker to diagnostic tests and treatment ranging all the way from a minifilm of the chest (with each pack) to a "lobectomy or pneumonectomy and three glorious weeks in a hospital" (with every hundred cartons).

But what of the smokers "who don't get cancer but just cancerophobia"? Well, says Dr. Gancher, in his county medical association bulletin, such persons should be entitled to "the grand prize of twenty-four months of psychoanalysis on a genuine Simmons Beautyrest Mattress."

MEDICAL ECONOMICS, August, 1954, pp. 213-4

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Arnold, K. E., Sioux City
(Port Hueneme, Calif.) Lt. (j.g.), U.S.N.R.
Berg, J. W., Ames.....
Bogle, W. C., Marion
(Minneapolis, Minnesota) Lt., U.S.N.R.
Brennan, J. E., Des Moines
(Camp Pendleton, Calif.) Lt., U.S.N.R.
Broman, J. A., Maquoketa
(Ft. Sill, Okla.) Capt., A.U.S.
Cline, H. L., Iowa City
(Riverside, Calif.) A.U.S.
Daut, R. V., Davenport
(Westover Field, Massachusetts) Capt., U.S.A.F.
Davidson, M. C., Emmetsburg
(El Paso, Tex.) Col., A.U.S.
Dooley, J. E., Fort Dodge
(Pleasanton, Calif.) Capt., U.S.A.F.
Dunseth, W. R., Kellogg
(APO San Francisco, Calif.) USAF
Eckhardt, R. D., Iowa City
(Portsmouth, Virginia) Lt., U.S.N.R.
Ehmke, Bruce C., Iowa City
(Hot Springs, Arkansas) 1st Lt., A.U.S.
Field, C. A., Cresco
(Manhattan, Kans.) Capt., A.U.S.
Frys, Russell N., Iowa City
Garred, J. L., Whiting
(San Francisco, Calif.) Lt., U.S.N.R.
Garred, W. P., Dow City
(San Francisco, Calif.) Lt. (j.g.), U.S.N.R.
Geist, James H., Iowa City
Giles, Francis E., Cresco
(Fort Bragg, North Carolina) A.U.S.
Gleeson, J. J., Vail
Godbey, M. E., Mt. Pleasant
(A.P.O. 862, New York City) Capt. U.S.A.F.
Gottsch, Joseph C., Shenandoah
(Goose Bay, Labrador) 1st Lt., U.S.A.F.
Hanske, Edward A., Des Moines
(Camp Gordon, Georgia) Capt. U.S.A.H.
Haskell, J. G., Reinbeck
(U.S.A.H., Ft. Riley, Kansas)
Hastings, R. A., Ottumwa
(Great Lakes Naval Training Sta., Ill.)
Hickman, D. M., Indianola
(Alexandria, Louisiana) 1st Lt., U.S.A.F.
Isham, R. B., Osage U.S.N.R.
Iwen, G. W., Iowa City
(Wabeno, Wisc.)
Jenkins, H. F., Ogden
(Randolph A.F.B., Texas) U.S.A.F.
Johnson, A. A., Jr., Council Bluffs
(Fort Worth, Texas) Capt., U.S.A.F.
Johnson, M. H., Iowa City
(Manchester, Iowa) Maj., A.U.S.
Johnson, W. A., Emmetsburg
(Corona, California) Lt., U.S.N.R.
Judiesch, K. J., Iowa City
(Ft. Sam Houston, Tex.) 1st Lt., A.U.S.
Kenney, B. E., Woodbine
(Kelly A.F.B., San Antonio, Texas) Capt., U.S.A.F.
Knouf, Clare E., Lake City
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(Pearl Harbor, T. H.) Lt., U.S.N.R.
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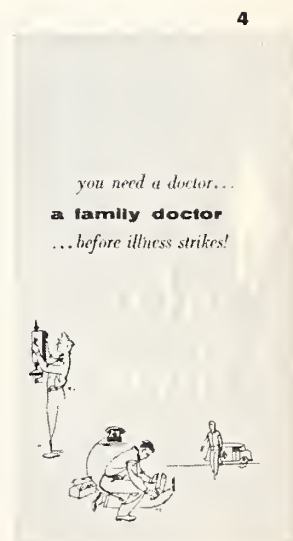
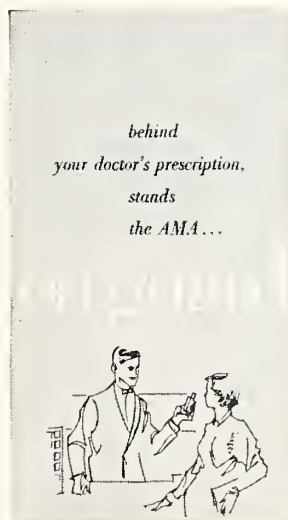
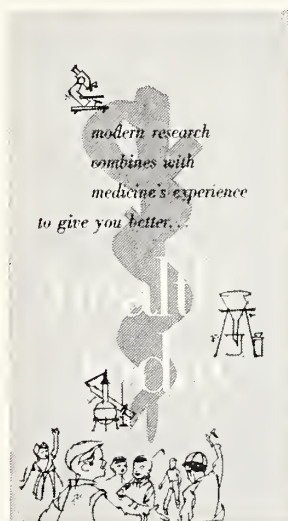
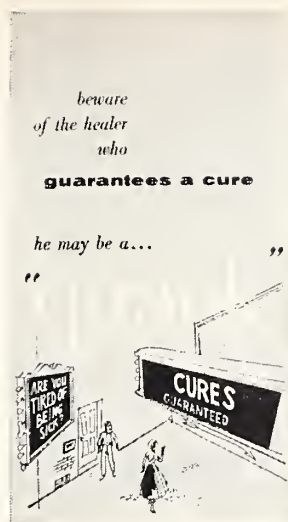
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PSYCHOSOMATIC MEDICINE

The program of the first annual meeting of the Academy of Psychosomatic Medicine, to be held at the Plaza Hotel in New York City on October 8-9, 1954, will be devoted to the psychosomatic aspects of surgery. Papers will deal with topics such as psychosomatic aspects of anesthesia, general surgery, gynecologic surgery, plastic surgery, otolaryngological and oral surgery, mutilating operations, endoscopic surgery, orthopedic surgery, eye surgery, pediatric and geriatric surgery and neurological surgery.

POSTGRADUATE COURSE ON CHEST DISEASES

The American College of Chest Physicians will conduct its Ninth Annual Postgraduate Course at the Hotel Knickerbocker, Chicago, on October 18-22, 1954. Further information can be had from the offices of the College, 112 East Chestnut Street, Chicago 11. Tuition is \$75.

POSTGRADUATE GASTROENTEROLOGY

The Sixth Annual Postgraduate Course sponsored by the National Gastroenterological Association will be given at the Shoreham, in Washington, D. C., October 28-30, 1954. Dr. O. H. Wangenstein, of the University of Minnesota, and Dr. I. Snapper, of Brooklyn, the co-chairmen, will be assisted by a distinguished faculty selected from medical schools and from Walter Reed Army Hospital. For further information, address the Association, Department GSJ, 33 West 60th Street, New York City 23.

INSURANCE UTILIZATION IS HIGH

The Iowa Medical Service (Blue Shield) report for the first six months of 1954 reveals that 81.82 per cent of doctors' charges for the year had been paid to date, and that total underwriting expenses were running at 13.18 per cent of earned income. It is noteworthy, however, that whereas 10 per cent of the subscriber's dollar was being paid to Hospital Service, Inc., of Iowa (Des Moines), 11 per cent was being paid to Associated Hospital Service, Inc. (Sioux City), though the enrollment in the two areas as of July 1 was 390,388 for Des Moines and 57,654 for Sioux City.

The Blue Cross financial report for June again called attention to the fact that the admission rate in hospitals served by the Des Moines Plan is still running quite a bit higher than is the experience for all Plans.

The JOURNAL

of the

Iowa State Medical Society

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Vol. XLIV

DES MOINES, IOWA, NOVEMBER, 1954

No. 11

Recent Advances in Internal Medicine

A review of 5 years' progress in the Department of Medicine of the S.U.I. College of Medicine

WILLIAM B. BEAN, M.D.
IOWA CITY

IN SMALL COMPASS, the high points of the recent developments in the Department of Internal Medicine at your State University, at Iowa City, reflect changes throughout the country and the world. A review of the period since my arrival finds sound growth in many places and a few where it has been small. When we look up from the annoying frustrations of the day-by-day routines, we may be discouraged by our own shortcomings or elated by our accomplishments, but I am proud of what has been done, and though I am aware of deficiencies, I am optimistic about the future. I shall spread before you the panorama of our activity more or less in alphabetical order. The space allotted to each section is not indicative of emphasis or importance.

ALLERGY

In the summer of 1949, Dr. Paul M. Seebohm came to establish the Allergy Section. I need not tell you of the extensive clinical material available here in the center of the pollen belt, our increasing interest in collagen diseases, the many problems of sensitivity and the revolutionary developments in steroid and pituitary hormones. Along with maintaining great clinical emphasis, Dr. Seebohm, in association with members of the Departments of Bacteriology and Radiology, has been able to undertake and complete basic studies on the mechanisms of sensitization. This program has been particularly helpful in teaching undergraduate students and residents.

BLOOD SURVIVAL STUDIES

Remarkable new insight into the mechanisms of anemia and into factors leading to hemolysis and to the influencing of the life span of red cells has developed out of the basic investigations of Drs. E. L. DeGowin, H. E. Hamilton and R. F. Sheets. They have perfected the biological tagging of transfused cells, the Ashby technique, so that cells of abnormal persons can be followed in normal recipients and the survival of normal blood in patients can be followed in precise detail. If a normal donor's cells are destroyed at an accelerated rate in any patient, one has reason to suppose that the patient's plasma or body mechanisms contain the source of the difficulty. The indication is verified if the patient's cells survive normally in a normal recipient. If, however, the patient's cells, when transfused into a normal recipient, have a randomly increased rate of disappearance, it appears that the erythrocyte is made badly or of poor material. When these methods have been employed, comprehensive studies on Cooley's anemia and various hemolytic anemias, and the conclusive demonstration of a hemolytic component in pernicious anemia have provided a clearer understanding of very difficult clinical problems. Studies on blood preservation and transfusion, which have been continued steadily for several years, are casting light on important practical problems.

CARDIOVASCULAR LABORATORY

In the fall of 1949, Dr. J. W. Culbertson was appointed director of the newly established Car-

diovascular Laboratory. In spite of the usual delays in organizing, equipping and arranging the laboratory in very small and cramped quarters, the program got off to an early start because of the close association between Dr. Culbertson and Dr. S. M. Horvath, in the Department of Physiology. The technical staff was trained, and a program of animal work progressed for many months before the Laboratory unit in the east wing of University Hospitals was opened. Beginning at a time when many operations for congenital heart disease had been perfected and when operations for rheumatic heart disease with mitral stenosis were beginning to flourish, we had a long backlog of patients whose eligibility for operation was to be determined largely through the efforts of the members of the Laboratory in conjunction with the members of the Departments of Surgery, Radiology, Physiology and Pediatrics. The diagnostic-therapeutic team has worked as a unit. Detailed studies of hemodynamics, studies of cardiorespiratory physiology, and gas and chemical analyses have permitted a happy blending of dramatic therapy with the advance of knowledge and understanding regarding many of the clinical problems. Basic studies on circulation in various internal compartments of the body, such as the liver, the kidney, the heart itself, and the lungs, have reached a level of perfection which is limited only by the multiple duties and numerous activities of the members of the Department. The subsection on renal physiology under Dr. Walter Kirkendall's able guidance has made valuable contributions to our understanding of kidney mechanisms, the most recent of which is the detailed study of the disturbed renal function of patients with Wilson's disease. Activity in the field of peripheral vascular diseases was greatly advanced under the guidance of Dr. R. S. Duff, who made some basic observations on the relationship of peripheral vascular reactions of blood flow in the sympathetic nervous system which have necessitated the revision of some of the basic formulations laid down by Cannon and other earlier workers.

Additional work in the Cardiovascular Laboratory includes a detailed study of the effects on the pulmonary circulation which are produced by obstructing blood flow through segments of the lung. Extensive studies on renal physiology in relation to hypertension are in progress. A comprehensive examination of circulatory dynamics in constrictive calcareous pericardial disease has been made both before and after surgical correction.

In the field of cardiopulmonary physiology, a team from the Departments of Surgery, Anesthesia and Medicine is concentrating upon the problem of emphysema. Dr. G. N. Bedell hopes to learn important new technical methods by studying the complex interrelationships of respira-

tory and circulatory physiology in Dr. Comroe's laboratory, where he is spending this year. The practical outcome of these several interdepartmental collaborations has been handled in a very active Chest Clinic. Its main function is to review each patient for possible eligibility for cardiac or thoracic operation and to restudy those patients who have had curative or restorative operations.

DIABETIC SERVICE

Under the direction of Dr. T. L. Carr, and now of Dr. R. C. Hardin, one of the vexing and unsolved problems of diabetes, namely, the association of vascular disease, cataracts and other degenerations, has been investigated, with emphasis on evaluating the part played by *duration* of the disease, the *severity* of the disease, and the *adequacy* of control. Because of the stability of the population and because of the great number of patients whose diabetic history Dr. R. L. Jackson, in the Pediatrics Department, was able to document in detail, we have more extensive and minute long-term studies than are available elsewhere. Very briefly, it has been found that all three factors have importance. As far as the evidence goes, a respectably close correlation has been found between these factors and the final ravages of the disease. Since the diabetic metabolic fault is the only one that we can influence favorably, it behooves us to control our patients with care. This information is particularly helpful when one is trying to arrive at a sensible philosophy about the management of diabetes, a field in which the radically different schools of belief have demonstrated far more enthusiasm and rabid support of doctrine than they have demonstrated proof for the validity of their ideas.

A number of metabolic studies have been done, including the clinical evaluation of insulin combinations and the study of fructose as a source of energy for diabetics.

GASTROENTEROLOGY

One of the main functions of the Division of Gastroenterology is the training of students and residents in the evaluation of the various diagnostic methods, especially of gastroscopic examinations and in the evaluation of oral preparations used in various gastroenterological diseases. Since Dr. J. A. Clifton's arrival, last year, this has continued. We now have in progress a study of peritoneoscopy and its diagnostic and therapeutic implications—a combined study of portal pressure as determined by inserting an intravascular catheter into the hepatic vein and comparing the results with those obtained at operation, where the portal pressure can be determined directly. The evaluation of combined Aureomycin, ACTH, glucose, fluids, electrolytes, sodium glutamate and

B-complex vitamin therapy in hepatic coma is in progress.

HEART STATION AND ELECTROCARDIOGRAPHY

Under the supervision of Dr. L. E. January, the Heart Station has expanded greatly. It combines teaching and research in this increasingly complex branch of general medicine. Dr. January has emphasized particularly the resident training program. Electrocardiology is presented along the lines of conservative general principles, rather than as a rule of thumb. We have investigated the therapy of bacterial endocarditis, the use of quinidine in paroxysmal arrhythmias, the effect of poliomyelitis on the heart, and the electrocardiogram. Close personal collaboration with members of the Cardiovascular Laboratory is mutually helpful. A concerted study of ballistocardiography and vectorcardiography is under way.

HEMATOLOGY

Under the direction of Dr. W. M. Fowler and Dr. Hamilton and with the collaboration of Dr. C. D. May, in Pediatrics, the Hematology Section has studied a large and remarkable collection of people with blood dyscrasias and neoplastic disorders. Bone-marrow aspiration or biopsy is emphasized. Its useful role in the diagnosis of carcinoma and melanoma has been established. The first demonstration of the L.E. cell without anticoagulants was achieved. Dr. Fowler has continued his long-term studies of iron metabolism and the therapeutic effects of the newer chemical agents in leukemia and Hodgkin's disease. The development of an effective test for heparin has had many clinical applications.

METABOLISM UNIT

For three years the Metabolism Unit has been going full blast. Its facilities for housing seven patients have been taxed. We have studied the effect of antagonists against some of the members of the vitamin-B complex; the relationship of chronic liver disease to steroid hormone excretions; and the evaluation and determination of new methods in the identification and isolation of various steroid hormones. In conjunction with Drs. Cartwright and Wintrobe, of the University of Utah, we have studied many patients with Wilson's disease in an effort to localize the metabolic flaw in which copper seems to be absorbed out of all proportion to its need, a condition perhaps analogous to the overabsorption of iron in hemochromatosis. The role of amino acids and copper in chelating mechanisms is under investigation. We have studied absorption in a number of people with idiopathic steatorrhea, and have investigated the apparently well members of their families to see whether we could establish a familial tendency to malabsorption. The role of

vitamin deficiency and, recently, the possible role of wheat gluten have been studied. Therapy with ACTH and cortisone has been investigated by means of detailed metabolic balance studies. The deficiencies which ensue in people who have undergone short-circuiting operations of the alimentary canal have been studied in conjunction with members of the Department of Surgery. Additional studies include observations on scurvy, protein and potassium metabolism in muscular dystrophies, thyroid metabolic studies, observations of nitrogen mustard in the treatment of arthritis, calcium metabolism tests, fructose metabolism tests and erythrocyte survival studies.

Under the careful direction of Dr. Kate Daum, in the Division of Nutrition, an enterprising research unit in the Department of Medicine works in close conjunction with the Metabolic Unit. Not only is this cooperation fruitful in research, but its accomplishments extend into the fields of teaching and patient care. Balance studies, observations of excretion of B-complex vitamins in urine, evaluation of the composition and size of meals in relation to activity, and the problem of postoperative nutrition in surgical patients have had detailed consideration.

I shall include a description of work we have had in progress in many other fields. For instance, Dr. Daum has completed very extensive studies of the thiamine requirement, of the physiological effects when thiamine is abundant and when it is at low levels, and the effect of breakfast and the size of breakfast on performance during the day. In spite of the fact that deficiency diseases are rather uncommon, we have made basic observations on pellagrous glossitis and have set up a rough scheme for therapeutic agents, demonstrating that coenzyme or cozymase induces the quickest effect, followed in turn by nicotinic acid or nicotinic acid amide, then tryptophane, liver extract, yeast and, finally, a good diet. In addition, the observation has been made that rather dramatic improvement has followed the employment of ACTH. The nature of this improvement is not known, nor has it been thoroughly studied. Emphasis on the tongue in pellagrous glossitis has demonstrated B-complex deficiency diseases in a region where obesity is the main symptom of malnutrition. The first published observations on the effect of vitamin B-12 on peripheral neuropathy came from us. We now have in progress some extensive studies on sprue, particularly an effort to evaluate the reported improvement in celiac diseases when gluten is removed from the diet.

We have done a number of clinical studies in cirrhosis. These include detailed evaluation of electrophoretic patterns in cirrhosis and in other diseases of the liver, with a comparison of the changes seen in serum and plasma. Clinical reports of several patients who developed cirrhosis after the long-term use of arsenic in the form of

Fowler's solution called attention to this sometimes overlooked clinical relationship. Detailed metabolic studies, in which we have used a portal anastomatic vein and a test meal of known constituents, have enabled us to evaluate the speed and qualitative variations in absorption. We hope to extend this observation further and to repeat the study in patients from whom we can simultaneously obtain blood from the hepatic vein through a cardiac catheter.

Dr. R. D. Eckhardt, from our Department, conducted an extensive study for the Army on infectious hepatitis in Korean soldiers who had been evacuated to Japan. A rather surprising observation that he made was that there was no difference in duration or severity of illness in those kept at constant rest and those permitted to be up and about as much as they wished. There was no gain in improvement following the addition of vitamins or proteins to the ample routine diet.

The problem of bleeding from esophageal varices has been studied, particularly by Dr. Kirkendall and Dr. Clifton, who have devised a program for the management of emergency bleeding from the upper alimentary canal. We have had several patients with Sheehan's syndrome from infarction of the anterior pituitary. We demonstrated for the first time the important role of cortisone in managing such a patient, in addition to the employment of thyroid substance and desoxycorticosterone acetate.

In our extensive studies on rheumatoid arthritis, we have followed standard lines, employing steroid hormones after a period of control. We have studied the permeability of synovial membranes before and after the systemic or local application of steroid hormones, and the role of salicylate in the treatment of arthritis. We have noted that nitrogen mustard produces a surprisingly effective method of controlling rheumatoid arthritis in a selected group of patients. Along these lines, studies are continuing on the excretion of 17-ketosteroids and corticoid hormones in persons with various liver diseases. Basic observations on methodology have demonstrated that caffeine interferes surprisingly in the detection of steroid hormones in the ketonic fraction.

PHYSICAL MEDICINE AND REHABILITATION

Under the direction of Dr. W. D. Paul, basic studies have been made on the physiological effects of increase in deep temperature and blood flow. The large, recurring epidemics of poliomyelitis have provided an enormous wealth of material in the field of rehabilitation. In consequence, physical medicine has been established as an independent unit, the medical director of which is Dr. Paul.

PSYCHOSOMATIC STUDIES

Since the arrival of Dr. B. I. Lewis, in 1950,

formal recognition has been given to the importance of psychological and emotional factors in disease. At the same time we have avoided the development of a new subspecialty or a separate specialty away from the broad central current in medicine. Attack on this problem has been emphasized in the psychosomatic teaching conference, in many group discussions and in a number of investigations in which the interrelationships of organic disease and emotional stresses and strains have been studied in detail. Some of the results of work in these lines include the uncovering of a large group of patients suffering from variations on the general theme of hyperventilation, in which atypical manifestations and bizarre symptoms obscured the nature of the illness. Recent studies have demonstrated unequivocally that the majority of people with so-called "collagen diseases" have objectively detectable lesions or disturbances in central nervous system function. We have emphasized the focus on general medicine, rather than on psychiatry, in orienting future practitioners in this one of the most difficult and controversial areas of current medicine. In doing so, however, we have had very close collaboration and advice from members of the Department of Psychiatry.

THYROID CLINIC

The opening of the radiation laboratory, with the availability of technics for measuring radioiodine uptake, and the introduction by Dr. M. H. Soley and Dr. S. B. Barker of methods for measuring protein-bound iodine in the blood have added to the basal metabolic rate an additional means for evaluating thyroid function. The program has been handled by a team from the Radiation Laboratories and the Departments of Radiology, Internal Medicine, Surgery and Pediatrics. The evaluation of patients by new diagnostic and therapeutic means and the extensive follow-up permit decision on the various forms of therapy which are now recommended. The disappearance of traditional departmental lines in this group enterprise is a very healthy sign. This story has been told you before.⁶⁸

MISCELLANEOUS STUDIES AND CASE REPORTS

Dr. R. C. Hardin has written several critical reviews on the pathogenesis and on the appropriate treatment of shock. Workers in cardiovascular disease have reported rare and unusual congenital anomalies of the heart. Basic investigation of the clinical effects of pyrogens has shown that fever produced by such a means has an effect in many ways analagous to that of ACTH. The rare concurrence of pregnancy and myxedema has been described in detail in a remarkable mother who had given birth to several healthy children, despite having an untreated case of that malady. Studies of the effect of intraperitoneal transfu-

sion have revealed that technic to be a very ineffectual way of getting blood into the circulation. Clinical experience with amebiasis suggests that it is a major and frequently unrecognized problem in Iowa. Dr. Hamilton's extensive investigations have revealed that there are numerous cases, some of them exhibiting atypical and bizarre symptoms. In the Gastric Laboratory, G.H.M. Dr. Thornton is making basic observations on newer methods for determining gastric acidity, experimental development of new test meals, and a critical analysis of the tests for occult blood. Along the strictly clinical lines of observation and natural history, I have accumulated a rather surprising set of experiences with rupture of the aortic valve, four instances of which have been diagnosed during life and verified at autopsy. Two of these have been reported. Strange precordial noises that can be heard at a distance from the chest, I have written about on the basis of personal experience and of a wide reading of medical reports. My additional observations have included data on a rather interesting decline in the rate of fingernail growth that I observed in myself over a period of ten years. Another study reported at a meeting of the Iowa State Medical Society concerned several kinds of sudden death and their different clinical backgrounds. People who have had myocardial infarction and have had, previous to it, a tendency to syncopal attacks have a much increased risk of sudden death. On the other hand, among cases of aortic stenosis, although sudden death is rather common, the fatalities haven't at all regularly had histories of fainting. The explanation, in all likelihood, is that the mechanisms of sudden death are different in the two diseases. In aortic stenosis, though the respiratory center may keep going for a number of minutes, the cardiac activity stops.

In Cincinnati before the war, and elsewhere since that time, I have continued studies on arterial spiders in connection with liver disease. As an extension of that work, I have made observations on the related and sometimes confused

lesions called the venous star, the angiomatous change in Osler's disease, the cherry angioma (the so-called senile angioma), the caviar lesion under the tongue, and the venous lakes often found just below the skin of the ears and face. The important thing about all of these lesions, with the exception of spiders and the telangiectases of Osler's disease, is the striking and consistent increase with aging. As befits a department head, I also have dipped my pen into the ink of philosophy and have taken my stand on questions of morals and ethics in medicine.

CONCLUSIONS

You have followed me in a brief review of our Department's progress during the last five years. To those who know us well, individually and collectively, it is no news that we have stressed excellence of quality in selecting new faculty members. This carefulness is reflected in our work, in which the triple responsibility of teaching, research and consultation makes a travesty of the illusion of academic leisure. I might have told you about our teaching and about our residency training program, but they have been related somewhere else.⁶¹ Of the 36 residents who have been trained, 13 are in practice, 10 are in military activity, 7 are in full-time academic medicine and 5 are in combined private practice and part-time academic work. One has metamorphosed into a surgeon.

It was the custom in ancient Rome to celebrate completion of the quinquennial census by ceremonial bathing—the lustrum. As a representative of your College of Medicine, it has been my pleasure to tell you of my stewardship. The accomplishments of the Department of Internal Medicine, though substantial, are not unique. Our pride in what we have done is tempered by our realization of what we have still to do. Our aim and hope is to serve you and our community, state and country in sustaining high ideals and high performance in medical teaching, research and service.

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A Mental Health Column for the Journal

It has been stated so often that the laity is more deeply interested in mental health than is the family doctor that the Subcommittee on Mental Health of the Iowa State Medical Society has found it advisable to keep the subject constantly before the physicians of the state.

People are learning that there is something that can be done for the mentally sick.

The family doctor, aware that more than 50 per cent of his patients are victims of emotional disturbance, will always be looking for a means of treating it that does not involve surgery or the administration of drugs.

To assist the general practitioner in that search, the Subcommittee will present a series of brief articles in the JOURNAL dealing with the recognition and treatment of mental diseases and personality disorders.

The Subcommittee hopes that every reader will find something useful in each of these presentations.

Subcommittee on Mental Health
J. I. Marker, M.D., Chairman

Problems and Prospects in Virus Immunization

FLOYD S. MARKHAM, Ph.D.*

PEARL RIVER, NEW YORK

IN VIEW OF THE current widespread interest—and not a little confusion—concerning the mass polio vaccination program, it seems worthwhile to review briefly some of the pertinent facts about virus vaccines. A survey of the technical literature of 20 years ago shows that a number of the leaders in the virus field were expressing doubt and skepticism regarding the utility of killed viruses as antigens. Their convictions were such that, in commenting on the occasional report of successful antibody stimulation by killed vaccines, some of these leaders wondered out loud if all of the virus in these successful vaccines had actually been killed. In the intervening years, much has been learned about viruses and the methods of propagating them, and many new viruses have been discovered, but during this time not much has happened to arouse enthusiasm for killed-virus vaccines. Preparations of this type have been made and used, but almost without exception, they have represented one kind or another of compromise with necessity. Few individuals were deluded into the belief that killed-virus vaccines give rise to a quality of immunity comparable to that which follows natural infection. Misleading as most generalizations are, it is not unreasonable to state that most of the problems and defects of killed-virus vaccines arise out of two fundamental properties of viruses—their small size and the necessity of propagating them in the presence of living host tissues.

Viruses are measured in terms of millimicrons—a unit of measure which conveys about as much to most of us as does the light year of the astrophysicist. It is difficult to appreciate just how small viruses really are, and we need a familiar reference point. Everyone has seen the typhoid bacillus—even though it was but through a glass, and darkly. In physical bulk, the typhoid bacillus is more than 100,000 times as large as the virus of poliomyelitis. The standard typhoid vaccine contains about 2 billion cells per cubic centimeter, but in spite of the fact that approximately 99.8 per cent of such a vaccine is only suspending fluid, it contains in the neighborhood of a million times as much effective antigen as will be found in an equal volume of polio vaccine, living or dead. Few would seriously contemplate diluting a typhoid

vaccine one to a million and expect it to provoke a substantial degree of immunity; yet this is essentially what we are asking of a killed-virus polio vaccine. The wonder, then, is not that killed vaccines in the past have been disappointing, but rather that some of them induced even a transient immunity.

There are a few killed vaccines, like those for influenza and mumps, which are relatively rich in virus antigen. They are rich because, by means of high speed centrifugation or precipitation methods, these viruses can be recovered from the allantoic fluids of the chick embryo comparatively free of extraneous host tissue. These two viruses attain high titers in the allantoic fluid of the chick embryo, and they also are large when compared with polio virus. Thus they lend themselves to practical methods of concentration. But they are exceptions.

By and large, then, it is because killed-virus vaccines suffer from the defect of antigenic insufficiency that they provide the defense mechanism with an inadequate stimulus. As a consequence, in order to obtain even minimal responses one must give large or repeated doses. This brings us to the second major source of difficulty: the necessity of growing viruses in living host tissues. Unlike the mumps and influenza viruses, which can readily be recovered from clear embryonic fluids, most viruses are intimately associated with host tissues from which it is either physically impossible or economically impractical to separate them. The result is that our virus vaccines in general consist largely of host tissues and contain only a very small admixture of the virus protein which is, of course, the antigen in which we are primarily if not solely interested.

These host proteins are the source of problems which are in no way concerned with the virus content of the vaccines, however small that may be. Most familiar and perplexing is the so-called paralytic accident or post-vaccination paralysis associated with the Pasteur treatment. In 1949, Pait and Pearson¹ reported that in Los Angeles, during the period of 1940-1946, one out of every 600 persons receiving Pasteur treatment developed post-vaccination paralysis. According to their calculations, the consequent risk was greater than that of developing rabies from the bite of a known rabid dog. It is now generally accepted that these

* From Viral and Rickettsial Research, Lederle Laboratories Division, American Cyanamid Company.

post-vaccination accidents are the result of allergic sensitization to constituents of the nervous tissues present in the rabies vaccine. The characteristic lesion in these accidents is acute perivascular demyelination. Rivers and Schwentker showed several years ago² that both the clinical and histological features of this disease could be reproduced in monkeys by repeated injections of sterile, autolyzed normal nervous tissues. More recently, our knowledge of allergic encephalomyelitis has been greatly expanded by the work of Freund³ and others, who have used adjuvants and normal nervous tissues. The allergic character of the clinical disease is further indicated by the greater frequency of such accidents in those who have been forced by repeated exposures to undergo Pasteur treatment more than once. It was recognition of a potential hazard of this type which compelled polio investigators to seek tissues of non-nervous origin for the preparation of polio vaccines, for it was anticipated that repeated injections and revaccinations, perhaps annually, would be required of a killed-virus polio vaccine.

Considerable interest has been evoked by recent reports from the veterinary field regarding sensitization following the use of homologous-tissue vaccines. One of these reports concerns virus abortion in horses⁴ and the other hog cholera.⁵ In both instances the vaccines contain considerable numbers of red blood cells. In both horses and hogs, as well as in dogs, there are red-cell antigens which are comparable to the human Rh antigens, and they are equally capable of inducing fatal hemolytic crises in the newborn. The work of Doll and his coworkers at the University of Kentucky indicated sensitization to these red-cell antigens as the cause of fatalities in the newborn of both horses and swine which had been treated with red-cell-containing killed-virus vaccines. While it seems unlikely that complications of this type might arise from the use of polio vaccine made from virus grown in tissue cultures of Rhesus monkey kidney, it is true that one or more of the human Rh antigens occurs in the red cells of the Rhesus monkey, and questions concerning this type of sensitization, as well as concerning the development of nephrotoxic antibodies,⁶ have been raised by at least one expert in the polio field.⁷ In answer to the latter question, it has been said that the manner of preparation of the polio vaccines results in a finished product containing only very small quantities of monkey kidney protein. Quantitatively this is undoubtedly true, but there is an equally small amount of the polio virus in the vaccine, and certainly that is expected to provoke antibodies.

Brief mention may also be made of another question which arises in connection with killed-virus vaccines. It is known that certain viruses contain more than one type of antigen and that some of these antigens are destroyed by chemical

and physical inactivating agents. For example, Craigie⁸ showed that vaccinia virus contains separable antigens, one of which is very labile. Bedson⁹ found that psittacosis virus possesses an antigen which is unstable when acted upon by phenol and certain other inactivating agents. It has been demonstrated in our laboratory that the mouse toxin of Newcastle disease virus is destroyed by simple freezing.¹⁰ There is suggestive evidence also that polio virus, small as it is, may contain more than one kind of antigen. This is indicated by the difference in the persistence of complement-fixing and neutralizing antibodies. Goldblum and Melnick¹¹ found that complement-fixing antibodies are typical of recent infection and that they disappear long before the neutralizing antibodies begin to decline. Nothing is known about the stability of these complement-fixing antigens or their importance in stimulating the defense against polio infection.

From what has been said up to this point, it can be understood that there is reason for the existence of more than one school of thought about polio vaccine. Speaking as a representative of a group which ultimately will be expected to produce polio vaccine without heavy subsidies from either the National Foundation or the National Government, I can say that we take a dim view of tissue culture and monkey kidney as a method of manufacture. As a production technique, it is very difficult and expensive. The noticeable and progressive decrease in the size of the present field trial which started at one million children is not entirely without relationship to the availability of adequate quantities of finished vaccine. It may also be noted that we obtain our supply of Rhesus monkeys at the pleasure of the Indian Government, which might see fit to cut off supplies at any time.

The supply of Rhesus monkeys is not unlimited, and experimental work all over the country this year has been hampered because of the large numbers of monkeys which have been diverted for the preparation of roughly half a million doses of vaccine. In view of the fact that in the U. S. alone there are 30 million children under 10 years of age who are potential candidates for vaccination, it is not difficult to see that this method of production is not a solution to the demand for a practical and effective vaccine.

NEW VACCINE SOUGHT

For a variety of reasons, then, other investigators have sought a better way of immunizing against poliomyelitis. If we survey the current state of our knowledge about polio as expressed by the leading investigators in the field, we find general acceptance of two facts: that the gastrointestinal route is the primary portal of infection and that most attacks, though subclinical, give rise to immunity. These two key observations have

been the starting point for much experimental work. The chimpanzee, which most nearly parallels man as regards susceptibility to polio, and the cynomolgus monkey are readily infected by the gastrointestinal route. Like man, they may or may not develop clinical polio, but they become fecal carriers of the virus. Some develop viremia and abortive attacks, whereas others come down with frank paralytic polio. Of particular interest, from the epidemiological point of view, is the relationship between passive immunity and infection as shown by studies in chimpanzees. Bodian¹² has shown that chimpanzees which were passively immunized with polio immune serum regularly became infected when fed polio virus. None of these animals developed clinical manifestations of the disease or viremia, but they did become virus carriers and were actively immunized as a result of oral exposure. Bodian, together with Howell and Morgan,¹³ also showed that five of 32 chimpanzees which had been actively immunized by gastrointestinal infection became reinfected three to six months later when they were again fed the same type of virus. This was demonstrated by the fact that they again became fecal carriers of the virus. The gastrointestinal susceptibility of actively immune human volunteers has also been demonstrated.¹⁴ These findings are of great interest and importance both because they are in accord with observations in human cases and because of the bearing which they have on the practical aspects of immunization.

First of all, these findings emphasize the fact that an immune population is neither a barren ground for the growth of polio virus nor a barrier to its spread—the contrary being a comfortable misconception which we entertain about many infectious diseases. Furthermore, it seems apparent that we must face the fact that polio virus is here to stay—that we are not going to eradicate it by mass immunization, no matter what kind of vaccine we use. Yet these facts are not as grim as they may at first appear to some people. Let us look at those facts from another angle. We have outgrown the habit of calling polio “infantile paralysis,” which was one of the early names applied to this disease. Today only about 20 per cent of the clinical cases of polio in the United States occur in children under five years of age, and there has been frequent comment about the increase in incidence of polio in the older age groups. Some have wondered if the virus were undergoing a change and developing a predilection for older hosts. Epidemiological studies do not suggest that this is the case. The contrary is dramatically shown by a survey study in Cairo, Egypt, carried out by Paul¹⁵ and others from Yale. In Egypt, as in many other areas where sanitation and hygiene are primitive, 70 per cent of the clinical polio is in children less than two years old, and 98 per cent of it is in children less than four years old. Out of

468 cases in 1948, only one occurred in an individual above the age of four. Paul and his collaborators found that by two years of age approximately 80 per cent of the children examined in Cairo had antibodies to the Lansing type of virus, and that roughly 75 per cent had antibodies to all three types of virus by the time they were four years of age. It should be pointed out that these figures were not collected in the midst of a devastating epidemic. The cases were sporadic and had to be ferreted out while Cairo moved along as it had for centuries, quite unaware that polio viruses were something to be concerned about.

It seems evident that in such a community a tremendous number of children become infected while they still possess their maternal antibodies. They develop neither symptoms nor viremia, but they become temporary fecal carriers and are actively immunized as a result of their early exposure through contaminated food. Thereafter, they are frequently re-exposed and periodically become reinfected carriers, thus contributing their bit to a natural and perpetual process of community immunization.

In contrast to the situation in Egypt and comparable places in many parts of the world, such as Bombay,¹⁶ we in America, by superior hygiene and sanitation, have broken or delayed the sequence of infection. Our children only infrequently become exposed to polio during infancy, so that the vast majority of them have lost their maternal antibodies by the time they are exposed to infection. In this way large numbers of susceptibles accumulate in our communities, and epidemic polio becomes a national preoccupation. Considerable numbers of our youth reach adolescence and young adult life without encountering immunizing exposures, and the rising age incidence is correlated with this fact.¹⁷ Surveys show that the frequency of infection is greater in the younger age groups among the underprivileged in our slums and the poorer communities, than it is among the children associated with the higher standards of living.¹⁸

To some^{14, 19} these various facts about the natural history of polio suggest what we believe to be a logical and realistic approach to the problem of polio vaccination. This involves live, attenuated polio virus administered by the oral route, with or without accompanying passive immunization with gamma globulin, and exposure by feeding at an early age. Admittedly this is a bold and ambitious program, but it is not a rash or makeshift compromise with sound experience. My colleagues, in cooperation with responsible medical officials in New York and California, have already provided evidence that such a system of polio immunization is safe and practical, as well as effective. Using an attenuated strain of the Lansing-type virus, one group of 20 volunteers in New York¹⁴ and a second of 61 similar subjects in California²⁰ have been fed

this rodent-adapted strain of the virus. All of these children were carefully observed and closely studied. No untoward reactions or incidents of any sort occurred, and the immunological response was eminently satisfactory. The sera of 77 of these 81 subjects were without significant neutralizing power for the Lansing-type virus prior to the feeding, and hence this number may be regarded as fully susceptible to infection with this type of polio virus. Virus isolations were made from the stools of 45 of these subjects following infective feeding, and 69 of the 81 developed antibodies corresponding to the type of virus fed. Dr. Koprowski, who has been primarily responsible for this work, and the rest of us at Lederle are highly gratified and encouraged by these results. It is our hope ultimately to cultivate all three types of polio virus in the chick embryo; for this, it seems to us, is the most practical method for mass producing a polio vaccine. A Lansing-type strain developed by Moyer²¹ has already been adapted to the chick embryo by Cabasso²² and Roca-Garcia,²³ in collaboration with Dr. Cox and others in our laboratory. Intensive efforts are now under way to adapt the Brunhilde and Leon strains to growth in this medium. Obviously much remains to be done, but we are convinced that the approach is sound and that, if patience and persistence can win, the adaptation to the chick embryo of these remaining strains of virus will be accomplished.

MERITS OF LIVE VIRUS

A live-virus vaccine produced in the chick embryo has many advantages. We have a great backlog of experience in the use of the chick embryo for the preparation of vaccines. Since eggs are readily available and cheap, a vaccine could be produced at a cost consistent with widespread use. Nobody wants a vaccine which is so expensive and scarce that some board or bureau would be obliged to evaluate the life you wish to protect before you could get the vaccine. The general freedom of the chick embryo from naturally occurring viruses or other infectious agents pathogenic for man is an outstanding advantage, and one which is offered by no other medium of mass production. This is especially important for a live-virus vaccine which is not going to have the blanket disinfecting action of formalin or some other inactivating agent. Because embryonic tissues *per se* are relatively poor antigens,²⁴ they are unlikely to induce sensitivities, and since oral administration is contemplated, difficulties of this type are minimized even further.

A live-virus, oral polio vaccine will immunize by virtue of actual infection at the natural portal of entry. Immunity induced in this manner may be expected to be more nearly comparable to that which follows natural infection. Some of Dr. Koprowski's volunteers have now been followed for more than three years, and their antibody levels are still indicative of satisfactory immunity.²⁵

Since all of these volunteers are institutionalized, it will be possible to make long-term observations on the duration of immunity.

Field testing of the vaccine of this type must proceed slowly and expand gradually, since many legitimate questions will be asked and must be answered. Many of these can be answered in the laboratory, but the definitive answers will come only with field use. We are confident that with the progress already made and the techniques now available to us, we can fulfill the rigid criteria for such a vaccine. The ultimate test, however, is acceptability. Are the medical profession and the public ready to accept it?

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Management of

Gas Bacillus Infections and Gas Gangrene

E. J. DREW, M.D.

DES MOINES

THE CLINICAL syndrome of gas gangrene and gas bacillus infections has been known since time immemorial. It is mentioned in the essays of Hippocrates and Pliny; Celsus wrote of the entity in the first century A.D.; and later Dupuytren (1778-1835) described a "spontaneous emphysema" in traumatized extremities, with subsequent rapid decomposition and death.

Jean Larrey, the chief surgeon for Bonaparte's armies, encountered so much gangrene with early death that he became an ardent advocate for expeditious amputation of all mangled extremities. This phenomenon also engaged the attention of the venerable Billroth (1829-1894), who felt it was activated by a ferment and named it "primary mephitic gangrene." Through some strange paradox, William Keen did not mention a single case in his chronicle of battle casualties in the American War Between the States, but, in contrast, it has been said that 100,000 German soldiers died of gas gangrene in World War I. It is readily apparent that the incidence is greatest in times of strife, but the disease occurs sufficiently often in civilian life to justify an awareness on the part of all physicians who treat traumatic wounds.

DISTRIBUTION OF ORGANISMS

The Clostridial group of organisms, consisting of *welchii*, *septicus*, *oedematiens* and *histolyticum*, is found in dirt, soil, human and animal excreta, and wool. *Cl. septicus* was discovered by Pasteur, and *Cl. oedematiens* by Novy. William Welch, assisted by Nuttall, isolated the organism that bears his name while dissecting a cadaver in 1892.

In gas bacillus infections, the responsible organisms in 80 per cent of the cases is *Cl. welchii*; in 10 per cent, *Cl. septicus*; and in 3 per cent, *Cl. oedematiens*. According to Altemeier and Gibbs, 39.4 per cent of all wounds of violence are contaminated with *Cl. welchii*, although clinical gas bacillus infection developed in only 1.76 per cent of 187,936 wounds. These findings would indicate that other factors, such as devitalized muscle or an impaired blood supply, must be present if the organisms are to be pathogenic.

CLINICAL ASPECTS

This type of infection occurs in penetrating injuries such as lacerations, fractures or puncture wounds, when they have been closed so that air has been excluded from them. Circulatory impairment from hematoma, edema, casts, pressure or arteriosclerosis may impair the circulation to such an extent that the gas-producing organisms begin to grow. Once invasion has started, a vicious cycle begins. The organisms destroy muscle by direct invasion or endotoxic action. In this process, gas is produced. The resulting edema in closed fascial compartments destroys more muscle, and the organisms have more cultural media. Thus, the infection becomes increasingly widespread. The presence of organisms does not necessarily predicate an infection, however, for members of the Clostridia group have been isolated from lung abscesses, from brain abscesses and also from foreign bodies that have been imbedded in the brain and lungs. In these cases the organisms were obviously present for a long period of time without producing any deleterious consequence *per se*. It must be reemphasized that in order for the organisms to be pathogenic, devitalized tissue must be present.

SYMPTOMS AND OBJECTIVE FINDINGS

The symptoms of gas bacillus infection or gas gangrene occur early—usually within 36 to 72 hours following the injury. They are:

1. Pain
2. Swelling, resulting frequently in a brawny edema and a tightness of the extremity
3. The formation of vesicles on the edematous skin
4. A brown skin discoloration
5. Unhealthiness of the wound and a serous discharge from it
6. A characteristic odor which has been described as "mousy" or "deadhouse" (It is said that many clinicians are able to diagnose a gas bacillus infection merely from the odor, without substantiation by bacteriologic study.)
7. The presence of crepitation in the tissues

(This usually verifies the infection, but it can be substantiated by Roentgen examination.)

8. High grade fever with disproportionate tachycardia

9. Clouding of sensorium and coma

COURSE OF THE INFECTION

An infection of this type spreads rapidly, and in the course of a few hours may pervade an entire arm or leg. Gangrene may occur early from impairment of circulation due to the accumulation of edematous fluids within closed fascial compartments. The systemic effects are those of rapidly progressive and overwhelming toxicity, with resultant pyrexia, chills, rapid pulse and falling blood pressure. The organisms liberate exotoxins, to which are added the toxic products of massive tissue destruction. The patients invariably appear ill, and they are nervous, irritable, apprehensive and sometimes delirious. A rapid wasting of the erythrocyte count occurs early. The shock in gas gangrene is frequently profound, and it does not respond to fluid and blood replacement. Early interruption of the disease process will rapidly diminish the concomitant shock.

MORTALITY

Mortality from gas gangrene or gas bacillus infection has been reported as anywhere from 25 to 50 per cent. Death may occur early from toxemia, shock and circulatory collapse. In the China-Burma-India theater during World War II, the mortality from gas gangrene was reported as 31 per cent. Birchall reported 40 cases in the European theater, with 19 deaths, or a mortality of 47.5 per cent. Three of the deaths were from antitoxin.

PREVENTION

There is no specific means of preventing this type of infection. The ravages of the disease are lessened by the application of sound surgical principles, early recognition and prompt treatment. It is also imperative that one recognize the potentialities in all wounds for the development of this type of process. There are several general rules which should be applied in the treatment of all traumatic injuries:

1. All the rules of surgical cleanliness should be applied in cleaning the wound.

2. Antiseptics should not be introduced directly into the wound, for fear of augmenting the already present tissue destruction.

3. No wound should be closed unless all contamination has been removed.

4. Every wound should probably be explored and debrided if the patient's condition will permit it.

5. The wound should be packed loosely.

6. Compound fractures should probably be converted into open or lacerated ones, with excision of the skin edges.

7. Dressings and splints should be loose, so that the wound can be easily examined.

8. A circular cast should never be applied. If it is necessary to immobilize the wound, an anterior or posterior splint should be employed.

TREATMENT

The treatment of a gas bacillus infection or gas gangrene is primarily surgical. If the extremity is obviously gangrenous, amputation should be employed. If the circulation is intact, longitudinal incisions, with due regard for ultimate anatomic and functional considerations, should be made.

Some doctors feel that penicillin helps combat the associated secondary bacterial invaders. The value of penicillin in combatting clostridial organisms, however, is questionable.

The use of antitoxin as a prophylactic measure seems to be valueless. It was used in the C.B.I. theater without results, and several physicians in the Western Hemisphere have reported questionable results, from a prophylactic standpoint. Furthermore, as a therapeutic measure the antitoxin has no more than questionable utility, and has been said to have caused many deaths from anaphylactic reactions. Reviewing 445 cases treated in the European theater during World War II, Odan said he felt that the antitoxin had been of little value.

The introduction of oxygen into the wound is of definite value in establishing aerobic conditions within the lesion. It is well known that these organisms will not live in the presence of oxygen, and their exposure to an unsympathetic atmosphere will necessarily make the infection self-limiting. Hydrogen peroxide, zinc peroxide or potassium permanganate can be placed directly within the wound, and recently the piping of oxygen into the wound has been instituted. Many elaborate types of apparatus have been devised for the dissemination of oxygen, but it can be accomplished easily and simply by merely suturing catheters with many fenestrae into the depths of the wound and then connecting the catheter to an ordinary tank of oxygen.

It is imperative for anyone who elects to treat this type of disease to distinguish a local infection with an intact circulation from one in which the circulation is impaired. The prognosis in a given case is determined more by the adequacy of the circulation than by any other single factor. It is mandatory that one distinguish between gas bacillus infection in which there is devitalized tissue and gas bacillus infection in which the circulation to the extremity has been irretrievably lost. A pure gas bacillus infection is one in which the integrity of the circulation has not been violated. It is obvious that if gas bacillus infection is allowed to run its course, it ultimately will turn into gangrene. Gangrene will always supervene if a major arterial pathway has been destroyed. Anerobic bacteria are

incapable of producing infection by their presence alone; rather, they must be aided by a failure of circulation or by extensive cellular damage under conditions that prevent free access of oxygen to the wound.

SURGERY

If an extremity is gangrenous, amputation is indicated. Gas gangrene is no different from any other sort in that regard. No case has ever been saved without amputation, and the operation should be done at the level of good blood supply, not at the level of crepitation or edema.

No attempt should be made to close the stump, and it should be treated as a localized clostridial infection.

In localized gas bacillus infections with an intact circulation, it usually is unnecessary to sacrifice the limb. Extensive incisions should be made throughout the entire infected area in the extremity. In addition, all fascial spaces should be incised so that all areas of infection are adequately exteriorized. It is imperative to remember that all forms of treatment—antitoxin, antibiotics, oxygen and oxygen-producing drugs—are secondary to prompt and adequate surgery.

ISOLATION UNNECESSARY

Most hospitals have always insisted that all cases of gas gangrene be isolated, and most books on surgical technics for nurses have advocated strict isolation. But in view of the ubiquity of the organisms, it seems superfluous to insist on it. Nursing personnel should be reeducated to the reality that the organisms, intrinsically, are relatively innocuous except in the presence of dirt and damaged muscle.

CASES OF GAS GANGRENE

1. G. S., a white male, age 6, crawled onto an electric transformer, and 40,000 volts of electricity went through his right arm. The wound was treated as a burn, and compression dressings were applied in a city hospital. It was examined 48 hours later, at which time it was completely gangrenous, and there was an odor present that was characteristic of a gas bacillus infection. The diagnosis was substantiated by bacteriologic studies, and mid-arm amputation was done. No attempt was made to close the wound, and zinc peroxide powder was applied to the open stump. The patient was also given gas gangrene antitoxin and penicillin. He ultimately recovered, and the extremity was covered with a split-thickness skin graft.

2. W. S., a white male, age 25, was a foreman in an implement factory where cornpickers were manufactured. It was his duty to inspect the finished product, and in the course of his examination, his right arm was inadvertently caught in the revolving mechanism. The result was an extensive laceration in the axilla, with division of the entire brachial plexus and brachial artery.

The wound was thoroughly debrided and the various trunks of the brachial plexus were sutured. The ends of the brachial artery were freshened and an end-to-end anastomosis was done. At first, it appeared that the anastomosis was sufficient to maintain circulation to the extremity, but after 48 hours, the forearm and arm became discolored, and a gas gangrene supervened. A high amputation of the arm was done, and no attempt was made to close the wound. The end of the stump was ultimately covered with a split-thickness skin graft.

3. T. J., a white male, age 45, sustained an electric burn of his right hand and forearm. It ultimately resulted in a complete thrombosis of the radial and ulnar arteries, and the entire hand and forearm became gangrenous. A gas gangrene supervened, and *Cl. welchii* were isolated. An amputation was done just below the elbow; no attempt was made to close the amputated extremity. It was ultimately covered with a split-thickness skin graft. Gas gangrene antitoxin was not given.

4. J. T., a white male, age 50, injured his right middle finger in a telephone pole accident. It was sutured by his local physician, but a large amount of edematous fluid subsequently collected within the finger. It became gangrenous, and *Cl. welchii* were identified. The finger was amputated, no attempt being made at closure, and an uneventful recovery occurred. Gas gangrene antitoxin was not administered.

These four cases represent gangrene due to destruction of circulatory pathways, followed by gas bacillus infection. In each instance, amputation of the gangrenous extremity resulted in a subsidence of the infection and recovery of the patient. The employment of antitoxin and antibiotics was merely an adjunct to the primary surgical treatment, when they were used at all.

GAS BACILLUS CASES WITHOUT GANGRENE

There were five cases of gas bacillus infection without gangrene:

1. J. B., a white male, age 10, fell from a tree in a pasture and sustained a compound fracture of his right radius and ulna. No attempt was made to close the wound, and in fact the laceration was enlarged and the wound was irrigated. There did not appear to be a necrotic muscle present. A posterior plaster-of-paris splint was applied after the fractures had been reduced. In 48 hours, the patient's temperature was 103° F., and there was a marked amount of swelling and crepitation in the arm and forearm.

Extensive incisions were made on the anterior and posterior aspects of the forearm and also on the lateral and medial aspects of the arm. Catheters were sutured into the depths of the wound for the administration of oxygen. Zinc peroxide paste was also placed in the wound, and the patient was given antibiotics and antitoxin. Approximately a week later, another incision was made in the pos-



Fig. 1. J. B., Case No. 1, gas bacillus infection without gangrene.

terior aspect of the forearm to drain a localized abscess. The infection subsided, and the cultures were negative in approximately two weeks following the injury. The defects were covered with split-thickness skin grafts, and about a year later an open reduction was done for non-union of the ulna. Following the application of an internal steel splint, the bone healed, and the patient was discharged about 21 months following the injury.

2. R. J., a white male, age 50, was in an automobile accident and received a wound of the abdominal wall that resulted in an evisceration of the small bowel. The intestine was so contused that 60 cm. of jejunum had to be resected. An end-to-end anastomosis was done, and the abdominal wall was closed with through-and-through sutures of No. 25 steel wire. The patient's convalescence was uneventful, as far as his abdomen was concerned, but, unfortunately, he was an alcoholic and developed delirium tremens following surgery. He was seen by a neurologist, who recommended paraldehyde intramuscularly for sedation, and it was given in his right hip. In a few days, pain, fever, crepitation and swelling followed. Incision was made in the right hip, and routine cultures showed *Cl. welchii*.

A large segment of his buttocks was excised, and the wound was treated with zinc peroxide locally. Gas gangrene antitoxin was not administered. The infection subsided, and the defect was covered with a split-thickness skin graft. This particular infection is interesting because it developed following administration of hypodermic medication in the buttocks.

3. R. C., a white female, age 61, had a diabetic gangrene of the right lower extremity, and a below-the-knee amputation was done, with primary closure. This was followed in 24 hours by pain, fever, swelling and the development of crepitation in the amputated stump. Bacteriologic studies showed

Cl. welchii. A supracondylar guillotine was done. Gas gangrene antitoxin was not given.

In retrospect, it would appear that this patient could probably have been treated by opening the wound and treating the stump as a localized gas bacillus infection. However, in view of the patient's age, arteriosclerosis and impaired circulation, it was felt that a higher amputation was mandatory. Perhaps it should have been done as a primary procedure.

4. P. B., a white female, age 25, was involved in an automobile accident and received a crushing injury to her left leg. There was a small, inconsequential fracture of the left fibula, and a laceration, about 30 cm. in length, on the lateral aspect of her leg. There appeared to be only a moderate amount of tissue injury, and it was felt unnecessary at the time to debride any muscular tissue. The wound was thoroughly cleansed with saline and white soap, and a primary closure was done. The following day, the patient's temperature was 103° F. There was marked swelling and pain in the leg, and crepitation was present. The original laceration was opened, and in addition, extensive excisions were made on the posterior aspect of the leg, extending from the popliteal space to just above the ankle. Another incision was made on the medial aspect of the leg, from the medial condyle of the femur to just above the ankle. The muscular compartments were also incised, and four catheters were sutured into the wounds for the administration of oxygen. In addition, zinc peroxide powder was placed in the wounds. The patient's convalescence was essentially uneventful, and the resulting wounds were covered by a split-thickness skin graft. Large doses of gas gangrene antitoxin and penicillin were given in this case.

5. J. M., a colored male, age 40, sustained a compound fracture of his right tibia and fibula in an automobile accident, and developed a gas-bacillus

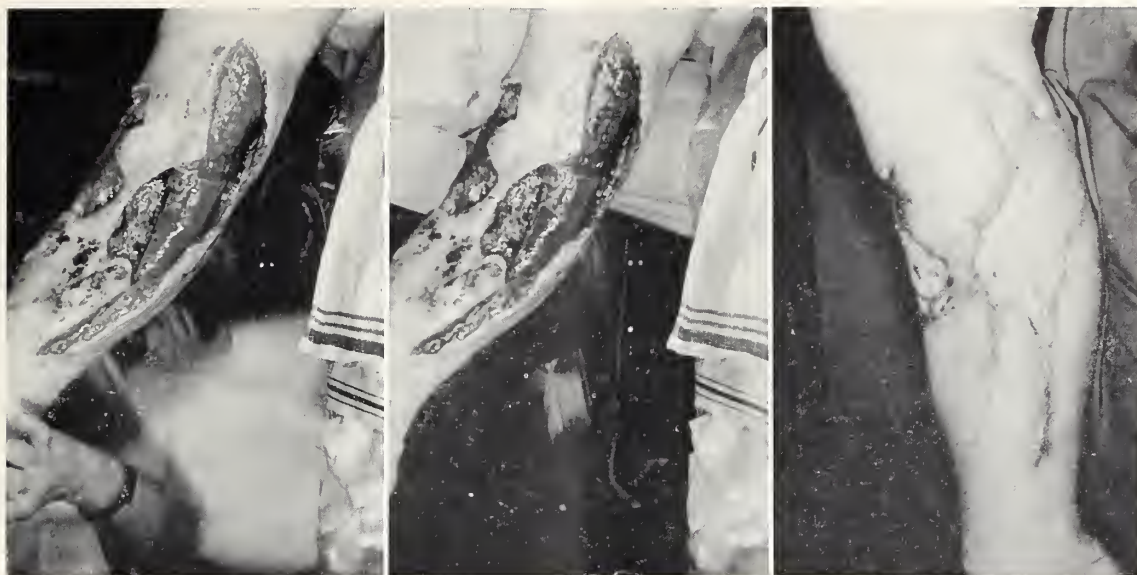


Fig. 2. P. B., Case No. 4, gas bacillus infection without gangrene.

infection. It was treated by enlargement of the wound, application of zinc peroxide paste, and local debridement. The patient's infection was under control, but he died from a bilateral renal injury. Gas gangrene antitoxin was not given.

SUMMARY

Four cases of gas gangrene and five cases of gas bacillus infection have been presented, with one mortality (11 per cent) resulting from a bilateral renal injury. At the time of this fatality, the patient's gas bacillus infection was under control.

It should be emphasized that treatment of gas gangrene and gas bacillus infections should consist primarily of surgery and secondly of the creation of an atmosphere that is deleterious to the growth of anaerobic bacteria. It should be reiterated that antibiotics and antitoxins are essentially valueless in the treatment of these infections. Further, the insistence by hospital authorities upon isolation of all cases of these diseases appears unwarranted.

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SIXTH CONGRESS ON OB. & GYN.

A five-day meeting, December 13-17, 1954, covering every phase of maternal and newborn care, is to be held at the Palmer House, in Chicago, under the auspices of the American Committee on Maternal Welfare, Inc., and the American Academy of Obstetrics and Gynecology. It will bring together the four major groups concerned in providing improved care for mothers and babies—medicine, nursing, public health, and hospital administration.

Information can be obtained from the Sixth American Congress on Obstetrics and Gynecology, 116 South Michigan Avenue, Chicago 3.

Failures of the Cataract Extractions and Their Pathologic Explanation

FREDERICK C. BLODI*

IOWA CITY

IN ORDER TO APPRECIATE OUR mistakes and improve our technic, we must first diagnose our failures. The complete failures in ophthalmology, especially after intraocular surgery, end with enucleation of the affected eye. Clinically, we all know when our failure has been complete after surgery. The result may be intractable pain, irrevocably lost vision or danger to the other eye. But only the histologic examination of the enucleated eye can tell us why the failure occurred. Such a procedure is as important to the ophthalmologist as an autopsy is to the general surgeon or to the internist.

The eyes have to be processed and prepared in special laboratories before such an examination, and Iowa ophthalmologists are invited to submit their problem cases to University Hospitals, Iowa City. We shall be glad to prepare the eyes and examine them. It is necessary that work of this sort be done within the state, now that the Armed Forces Institute of Pathology has more work than it can take care of.

The failures of cataract surgery could be presented in either of two ways. (1) I could go through all of the complications systematically, but nothing could be gained from such a presentation that could not be found in a textbook. (2) I could point out which of the complications occur with relative frequency and which ones are comparatively rare. If we can prevent or treat the two or three most common complications, it will be possible, in the future, for us to save eyes like those that we have been losing.

Having chosen the second of those alternatives, I shall give you a survey of 150 eyes which had to be enucleated after cataract extraction and which I have examined in various laboratories during a period of approximately 12 years. If we assume that about 0.5 per cent of all eyes which undergo cataract extraction come to enucleation—and that would be a conservative estimate, for the percentage has been declining—those 150 eyes reflect the poor results or final failures of at least 30,000 cataract extractions.

Among those 150 eyes, 77 were enucleated after an extracapsular extraction, and 68 after an intracapsular operation. Three were enucleated after a linear extraction, and one after discission for congenital cataract.

The most frequent cause for postoperative fail-

ure was secondary glaucoma. The frequency of this complication was remarkably similar in the extracapsular and intracapsular series. In both, it amounted to about 35 per cent of the eyes. The cause for the glaucoma varied greatly, whether the operation was done within the capsule or extracapsularly. Secondary glaucoma after extracapsular extraction was frequently caused by remnants of lens fibers or of the lens capsule within the eye (Fig. 1), and especially in the wound. These remnants frequently caused adhesion of the iris to the peripheral cornea, resulting in the obstruction of the angle of the anterior chamber. After intracapsular extraction, the most frequent cause of secondary glaucoma was the adhesion of the iris to the cornea because of delayed restoration of the anterior chamber. In other cases of secondary glaucoma, the excessive proliferation of scleral tissue from the wound covered the posterior surface of the cornea and extended into the angle. Loss of vitreous only rarely accounted for secondary glaucoma leading to enucleation. Defective wound healing or an incorrectly placed incision (Fig. 2) may lead to anterior synechiae and to secondary glaucoma.

The next most important reasons for failure after

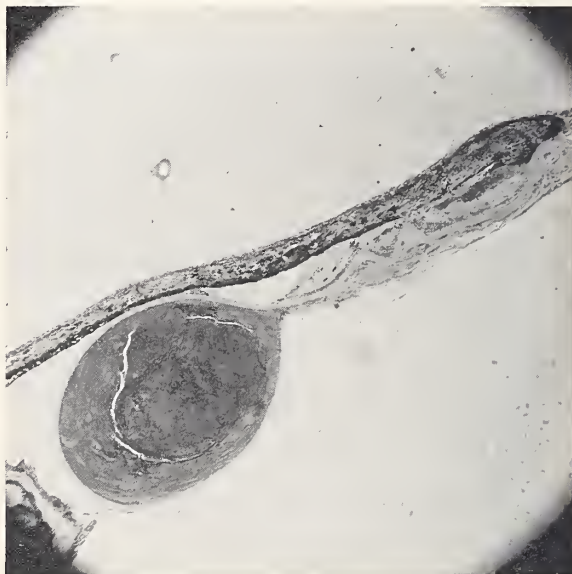


Fig. 1. The iris has become adherent to remnants of the lens after an extracapsular extraction. Secondary glaucoma follows.

* From the Department of Ophthalmology, State University of Iowa, and the Veterans Administration Hospital, Iowa City.

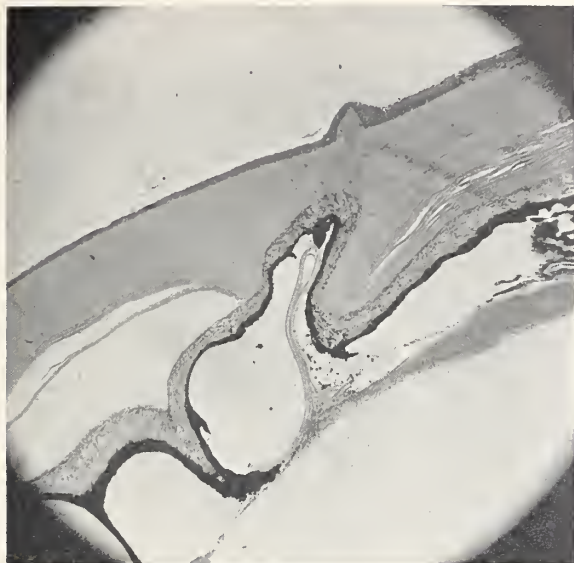


Fig. 2. Corneally placed wound, to which iris and lens capsule have become adherent.

cataract surgery were chronic uveitis and epithelial downgrowth. Chronic uveitis occurred more frequently after an extracapsular extraction. Here it accounted for 26 per cent of all the failures. Among the eyes enucleated after intracapsular extraction, only 6 per cent had had to be sacrificed because of a chronic uveitis. This difference is statistically significant. We all know that a uveitis will occur more frequently after extracapsular extraction. The lens fibers remaining in the eye are irritating and act like a foreign body. In addition, they may very well be an excellent medium for microorganisms. We also know that the protein of the lens is antigenic and may precipitate an inflammation. These instances of chronic uveitis are characterized by a more or less diffuse infiltration with round cells, especially with lymphocytes and plasma cells. This is, therefore, not to be confused with a granulomatous infection or with an acute purulent inflammation.

Epithelial downgrowth along the wound into the anterior chamber (Fig. 3) has occurred more frequently after intracapsular extraction. Here it accounted for 29 per cent of the postoperative failures, but only for 14 per cent among extracapsular extractions. This again is statistically significant. We can only speculate as to the importance of these figures. It seems, however, that during the last decade or so, epithelial downgrowth has been more prominent among our complications. This may be merely an apparent increase in frequency because of a relative decrease of secondary infections, or it may be an absolute increase because of some change in our technic. Many people have supposed that sutures, when placed too deep into the stroma, may very well precipitate epithelization. In other instances it may be the absence of a conjunctival flap which precipitates the down-

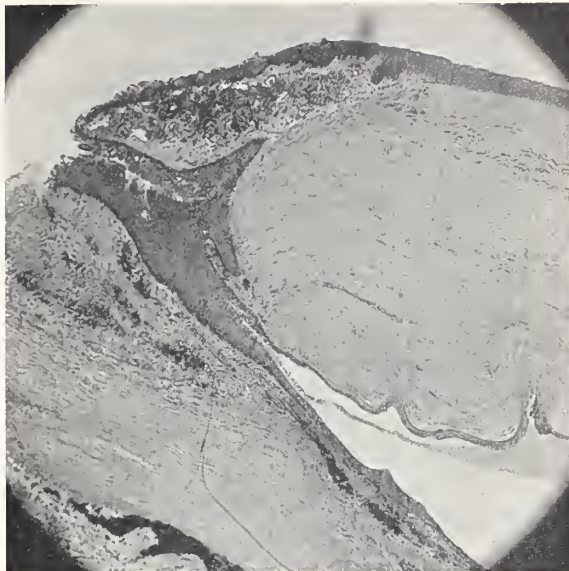


Fig. 3. Downgrowth of surface epithelium along the open wound into the anterior chamber.

growth of epithelium. In any case, this is a very serious complication, and we are completely helpless as regards treating it.

It is interesting to note how rare a purulent infection has become in our era of antibiotics and chemotherapy. Only 8 per cent of all enucleations were due to a purulent infection. Among these 12 eyes, 2 cases were instances of late infection. We are probably justified in predicting that with the improvement of our operating-room technic and with the improvement of antibiotic therapy, purulent infections will become rarer and rarer. The cases of late infections are usually due to poor



Fig. 4. Cystoid scar after defective wound healing. Late infection may follow.

healing of the incision, with the formation of a cystoid scar (Fig. 4).

Ten per cent of all eyes were lost because of a retinal detachment. Eight eyes had to be enucleated because of retinal detachment after intracapsular extraction. These account for 12 per cent of all the failures. However, since five of these eyes had had a preceding retinal detachment, the extraction cannot be held responsible for the final failure in all of those instances. The extraction was done only to improve the visualization of the fundus. The incidence of actual postoperative detachments is, after this correction, identical, whether the operation was intracapsular or extracapsular. These findings therefore do not corroborate the old myth that an intracapsular extraction may precipitate a retinal detachment.

Only eight of these eyes were enucleated because of a sympathetic ophthalmia. This occurred somewhat more frequently after an extracapsular extraction. However, the figures here are too small to be of any statistical significance. This severe complication is relatively rare and can be expected in no more than one out of 4,000 extractions. The modern ways of treating this inflammation may perhaps somewhat reduce the numbers of final failures that come to enucleation.

All of the other reasons for postoperative enucleation were much rarer. Twice, the lens nucleus was luxated into the vitreous. In three cases, the preexisting primary glaucoma finally led to enu-

cleation, and in a single case each there were expulsive hemorrhage (Fig. 5), hemophthalmus, and vitreous adhering to the cornea.

AMA CLINICAL MEETING

The 1954 Clinical Meeting of the AMA, which is to be held November 29-December 2, in Miami, Florida, is to include subjects of broad interest in the fields of medicine, surgery, pediatrics, neuropsychiatry, obstetrics and gynecology. Outstanding authorities from all over the country will be there to present their talks and to answer questions, and there will be a dozen symposia and panels. Many of the practical problems of the physician will be covered.

There are to be 80 scientific exhibits, and they will be open all day long each day. Demonstrators will be on duty constantly so that the visiting physicians may ask questions and discuss their problems. Special features will include a fracture exhibit, where demonstrations will be conducted by some of the leading surgeons of the country. Visitors are invited to bring roentgenograms of the cases that they wish discussed. There will be manikin demonstrations to illustrate obstetric technics.

A special feature will be a film program on Tuesday night at the McAllister Hotel, where, among other showings, there will be the *premiere* of "Lung Cancer: The Problem of Early Diagnosis," sponsored by the American Cancer Society, and "Differential Diagnosis of Arthritides (Rheumatoid, Osteo, and Gouty)," by Dr. Wm. B. Rawls, of New York. The authors will introduce each presentation and will be available afterward to answer questions.

Color television has become an important part of all AMA meetings and will again be shown in Miami. The programs will originate at the Jackson Memorial Hospital and will bring the operating room directly into the lecture hall. The visiting physician will be able to see more of the operation than he would if he were in the operating room.

JAMAICA MEDICAL MEETING

Doctors attending the AMA Interim Meeting in Miami are invited to a postconvention meeting of the British Medical Association, Jamaica Branch, at Kingston, Jamaica, on Saturday, December 4.

Jamaica is reached from Miami by airliner in a pleasant 2½-hour trip over the Gulf Stream, across Cuba and a corner of the Caribbean Sea. At the close of the AMA session on Thursday, December 2, doctors and their wives could fly to Jamaica on Friday, attend the British Medical Association meeting Saturday forenoon, and then enjoy the attractions of the island as long as they wish, returning to Miami by any of the several flights scheduled daily.

Further details will be available at Information Desks at the Miami meeting, from the American Express Co., and from local travel agents.



Fig. 5. Expulsive hemorrhage. Blood is pushing the contents of the eye out through the wound.

Clinical Pathologic Conference

April 21, 1954

SUMMARY OF CLINICAL FINDINGS

A 34-YEAR-OLD WHITE MALE was noted to have episodes of hyperactivity, followed by periods of dejection. He consulted the Departments of Neurology and Psychiatry in April, 1947, because of a loss of ability to converse, fear in expressing himself, loss of ability to concentrate, loss of self-confidence, loss of efficiency, poor memory and a feeling that he was destroying the people who loved him. A similar episode of depression had occurred at the time he was married.

The treatment administered consisted of benzedrine sulphate, 10 mgm., in the morning and at noon, and sodium amytal, 3 gr., at bedtime.

He returned to the Department of Psychiatry in October, 1947, markedly depressed. For several months after his previous visit he had gradually improved, but in August, 1947, he made several bad financial deals and lost considerable sums of money. In order to cover up the original loss, he kept cashing checks to cover the preceding bad checks. Eventually he was unable to escape the consequences of that sort of procedure, and a marked depression followed. Psychotherapy was instituted, and the patient slowly recovered, but he continued to enter into poorly planned business ventures. After 17 months he returned to the hospital in a marked depression. Electric-shock therapy produced a remission of the symptoms of depression.

The next admission was on January 6, 1953, when he returned to the Department of Psychiatry complaining of difficulty in swallowing due to tightening of the throat muscles. A similar episode had occurred one year prior to admission. The difficulty in swallowing occurred in episodes lasting one to three minutes, preceded by an impression of stuffiness in the nose and in the front of the head. On one occasion the episode was followed by a numbness of the right side of the body which lasted for two days. Three days prior to admission, a similar episode produced numbness in the right upper extremity and in the right half of the face. However, by the time of admission it had completely disappeared. In addition, he noted the frequent occurrence of headaches. There was no evidence of psychiatric disease present at that time, and a consultation with the Neurological Service was obtained.

The neurological examination failed to reveal evidence of an intracranial lesion; and since he had had unexplained and untreated hypertension for

ten or twelve years, the Urology Department was asked to make sure that there was no renal cause for hypertension.

Physical examination revealed a well-developed, well-nourished white male in no acute distress. The blood pressure was 280/150 mm. Hg., the pulse was 76 per minute, and the respirations were 24 per minute. The head and neck were normal. Fundoscopic examination revealed hypertensive retinopathy without evidence of specific etiology. The thyroid gland was slightly enlarged, soft, and non-tender. The lungs were clear to percussion and auscultation. There was a harsh, systolic murmur located over the pulmonic area without transmission. Examination of the abdomen revealed no masses or organs palpable. The genitalia were that of a normal adult male. On rectal examination the sphincter tone was good, and the prostate was of normal size, shape and consistency.

On admission, a urinalysis revealed a specific gravity of 1.014, an acid reaction, negative albumin, sugar and Meyers, and a negative microscopic examination. The hemoglobin was 16 grams per 100 ml., and the white blood count was 12,350 per cu. mm. The blood urea nitrogen was 17 mg. per cent, and creatinine was 1.4 mg. per cent.

Intravenous urograms revealed prompt excretion of the radiopaque material from both kidneys, with normal pelvis and calyces bilaterally. Comparison with a film that had been taken while the patient was a student at the University of Iowa revealed that there had been a downward change in the position of the left kidney and that the upper pole had been tilted laterally. Because of those findings, a perirenal insufflation of air was performed on the left side under general anesthesia, and the X-ray films then taken were interpreted as showing no evidence of a left suprarenal mass. A benzodioxane test, performed while the blood pressure was elevated, was negative. A sodium-amytal test and a provocative test with hexamethonium were also negative. A repeat examination by intravenous urography and perirenal insufflation of air was performed, and again the results were interpreted as normal.

In spite of the negative findings, the patient was considered for exploration of the left retroperitoneal space. However, twelve hours following the second perirenal insufflation of air, the patient suddenly collapsed while he was stooping to pick up a package of cigarettes. When found by the physician, he was lying prone on the floor sweating profusely. His speech was quite thick, and he com-

plained of pain in the right parietal region. The blood pressure was 210/140 mm. Hg.; there was a left facial paralysis; the left arm and the left leg were paralyzed; and there was a positive Babinski on the left side.

The following day, the blood pressure was 200/140 mm. Hg., and the patient was comatose. Hexomethonium was given subcutaneously with very little effect on the blood pressure. Respirations were very rapid. The rectal body temperature was elevated to 105.4 degrees F. The next day the temperature was 101 degrees F., the blood pressure was 190/110 mm. Hg., and no change in his condition was noted. Oxygen was administered by nasal catheter, and fluids were given intravenously. Later that day, the respirations became labored, and the Department of Anesthesiology applied an Emerson respirator. On the third day, the blood pressure was 110/70 mm. Hg., and the pulse was very slow and weak. Respiration could not be sustained without the respirator. Supportive therapy was continued, but the blood pressure gradually dropped until it was recorded at 85/55 mm. Hg. on the fifth day after vascular accident. His course was gradually downhill, and he expired on February 18, 1953.

CLINICAL DISCUSSION

Dr. Ruben H. Flocks, Urology: This patient was admitted to the hospital and sent to the urological service in the first part of 1953 with the findings which are recorded in the protocol. His first admission to the hospital here was to the Departments of Neurology and Psychiatry, and the story is relevant. I am going to ask Dr. Huston to emphasize some of the points of the story at that time and then continue it up to the time of his admission to the urological service.

Dr. P. E. Huston, Psychiatry: I think that the material in the protocol with respect to the psychiatric aspects of this man's illness is essentially correct. I saw him first in 1947 on referral from Dr. Sahs, and at that time he had complaints which were typical of depression. I think Dr. Flocks had seen him earlier because of a history of prostatitis, which was reported as non-specific. It had been recommended that he receive penicillin and streptomycin. I placed him on symptomatic treatment for depression, using benzedrine sulfate and amytal. He was seen again later in the fall of 1947 by Dr. Miller of our department. At this time he had swung over from a depressed state to an excited one, and then again in November he seemed to have largely recovered from this excitement. Following this, he cycled between episodes of depression and elation. During his periods of elation he became involved in business deals in which he showed poor judgment, spent money excessively, accepted responsibilities which he could not meet, and caused great difficulty for his family.

He returned to us in January, 1949, while de-

pressed, and was admitted to the hospital. We discovered a very difficult problem in his relationship with his father, a very prominent, self-made man who had tried to impose his will on the patient. The patient had rebelled, and there was a marked father-son battle. Attempts were made to treat him with psychotherapy. After a month of unsuccessful treatment, he was placed on electrotherapy. He received six treatments and responded well. Following his release from the hospital, he remained well. I saw him again in January, 1953. At that time he gave a history of tightness of his throat muscles and difficulty in swallowing which dated back a year, occurring in very short episodes lasting two or three days. There had also been paresthesias around the mouth, unilateral in character, and also an episode of numbness covering the right side of the body. This lasted two days and was sharply demarcated at the midline. Just before I saw him, he had had another attack of numbness which had involved the right hand and arm, and the right side of his face, but this was improving and nearly gone. He also complained of occasional transient headaches which he thought might be connected with emotional tension.

On this examination I found the blood pressure to be 150/110. This, to my knowledge, is the first time he showed any evidence of hypertension. I checked back through our records carefully, and found that the blood pressure was recorded within normal limits for all previous occasions. Second, on this occasion the deep reflexes were somewhat more active on the left than on the right. There were no sensory changes. Because he was improving, I decided to temporize for two weeks. He came back feeling much better. I was still puzzled by the picture, and I felt more certain that his trouble was not fundamentally psychiatric. The hypertension of 150/110 was still present, and the deep reflexes were more active on the left than on the right. Because of this finding, I again sent him back to Dr. Sahs for evaluation.

I should like to emphasize (1) the fact that his episodes of depression and excitement were unrelated to the subsequent course, and (2) the importance of adequate re-examination in spite of previous history. This patient could have been considered to have psychiatric disease. However, it was not possible to demonstrate an emotional etiology, and the physical findings did not fit a psychiatric syndrome.

Dr. Flocks: Would you like to discuss the findings back in 1947 and then the more recent ones, Dr. Sahs?

Dr. Adolph L. Sahs, Neurology: In 1947, his blood pressure was listed as 140/80. I have a list of the original symptoms recorded by the patient.

He lost his ability to converse with people, and I believe that that was the predominant feature of the original referral. There might have been some question about his having some aphasic difficulty

at that time. "Voice sounds unnatural, afraid to express himself, lost capacity to concentrate, worried about inability to do things, uncomfortable when people come to visit." The reason I am listing these is that I am going to tell you later about his symptomatology as he expressed it to me several years later. "Lost confidence in self, slowed down in thinking and movement, fatigue and loss of pep, situations looked big to him, poor memory, thinks he has made a mess of things, smokes constantly because he is so tense."

Now, compare this symptomatology with that of 1952. In February, 1952, new symptoms began to make their appearance. The warning consisted of a peculiar sensation over the bridge of the nose, as though he had received a blow. This was followed by a tight feeling in the throat and chest, then difficulty in breathing. During this time he found it difficult to swallow, and he became incapable of speech. There was tightness of the throat, and there was numbness of the lips. Sweating occurred, but he did not become unconscious. The attacks were more likely to occur when he missed sleep. The patient said that he had a total of eight or nine of them in the past year, the total length being three to five minutes. Recently, he had had one in the presence of his employer, and the employer said that he was pale. Then came the episode of numbness on the right side of the body, slight differences in the reflexes, and the observed pressure here of 180/110. I certainly thought that this was a situation which called for further diagnosis for the possibility of a pheochromocytoma, and hence the referral to Dr. Hardin and Dr. Flocks.

Dr. Flocks: This patient, then, had a peculiar group of symptoms which had changed from 1947 to 1952 and had become a group which occurred in attacks with a peculiar sensation about the mouth and throat—a tightness about the throat and neck, accompanied by pallor—and at one time was proved to be associated with hypertension. Because of the hypertension, we were asked to see the individual to discover whether there were anything that could be demonstrated in the urinary tract or about it which might prove to be the cause of the hypertension or be associated with it.

When we saw this patient, we found nothing to add to the physical findings thus far. Intravenous pyelograms were made. They showed both kidneys to be functioning well and to be within normal limits, but in contrast to the ones made in 1947, they showed one significant change.

The ones taken in 1947 show that the left kidney is functioning and is normal. The position of the upper calyx in relation to the first lumbar vertebra was evidence of that fact. In 1953, in contrast, the right side was exactly the same as in 1947, but, as the picture indicated, the calyx was much farther away, on the left side, and the kidney seemed to have been pushed downward. This difference led

us to believe that there might be a tumor of the left adrenal. Perirenal air injection was carried out, and the evidence of air coming around the kidney seemed to indicate that there was a mass present which could be a tumor. There was some difference of opinion among several of us as to whether or not this was an artifact. Because of the downward shift in the position of the kidney, many of us felt that it represented a tumor. Studies repeated several days later again showed this peculiar distribution of air.

No visualization was made of the right side, and because the right kidney was not displaced downward, it was felt that a unilateral lesion was present. Improvements in technique of the presacral air injection have made it possible now to obtain visualization of both sides more easily, actually, than we have been able to obtain from one side by the perirenal air injection.

As a result of the intravenous urogram, the left side's being displaced downward, and the perirenal air injection on the left side of this patient, a tentative diagnosis of a left adrenal tumor was made. Upon the basis of the hypertension and the intermittency of the symptoms, it was felt that it was probably a pheochromocytoma. Confirmatory studies were made, and several findings in the eyes were found. Dr. Leinfelder will discuss this aspect.

Dr. Placidus J. Leinfelder, Ophthalmology: The changes in the retina of this patient were those of hypertensive vascular disease, and as was reported on the consultation slip, these changes were no different from those seen in any other patient with hypertensive vascular disease. In other words, a uniform picture of retinal and vascular changes occurs whether it is due to adrenal tumors, renal disease, or a primary hypertension. However, it is of interest that in a number of cases of suprarenal tumors, changes occur in the cornea and conjunctiva. In the cornea, medullated nerves have been recognized. These are the normal corneal nerves that have become opaque because of the abnormal medullary shield. They should be non-medullated. Occasionally, it is true, a short medullated fiber can be seen normally at the edge of the limbus. Yet this never approaches the extent of medullated nerves that can be observed in pheochromocytoma patients. The second change is in the conjunctiva and consists of one or more tumors of the neuroma variety. They may occur in the bulbar conjunctiva, at the limbus, or in the palpebral conjunctiva. In a patient seen here in about 1939, who had pheochromocytoma of the adrenal, there was an extensive white plexus of medullated nerve fibers. On his palpebral conjunctiva he had a number of tumors, which appeared to be neuromas. Normal corneal nerves could not possibly show up as they did in his case. In the upper portion of the limbus, in that same patient, there was a small, overhanging mass composed of

neuromas. These characteristically occur in some cases of pheochromocytoma.

In the fundus, the typical changes during vascular disease consist of a segmental narrowing of the arterioles, a cottonwool area of degeneration and an occasional hemorrhage. This is evidence of generalized constriction of the blood vessel, due to a moderate amount of hypertensive retinopathy with quite advanced arterial changes, but is a finding not at all incompatible with what would be seen in pheochromocytoma of the adrenal. In the more marked cases of vascular disease, there are edema of the macula and degenerative changes throughout the fundus. An occasional artery may have been occluded, and elsewhere there may be some marked changes in arterioles—so marked, in fact, that in places it is difficult to see them. I have seen adrenal tumors with a picture of this variety. In still more marked cases, the nerve head becomes completely obliterated by edema and exudation. There are hemorrhages, and the blood vessels are very difficult to see because of the great amount of edema.

After the removal of the adrenal tumor, if the condition has not persisted for too long a period of time, the retina can return to normal, and even the arterioles can lose their constricted appearance. Even in advanced retinopathy, one would expect surgery to result in a disappearance of the degenerative and hemorrhagic changes in the retina.

Dr. Flocks: Certain other tests are usually carried out in these cases, and Dr. Kirkendall will discuss them.

Dr. Walter Kirkendall, Internal Medicine: Most of us are interested in the curable forms of hypertension, and pheochromocytoma, which represents one of the curable forms, has received a large amount of attention as far as pharmacologic tests are concerned. In general, pharmacologic tests can be grouped into two large categories. One is the provocative procedure, where tests are made to elevate the blood pressure, and the second is a blocking test, where attempts are made to lower blood pressure that is already elevated. An example of the first type is the histamine test. The mechanism by which these provocative tests work, it seems probable, is by causing a transient drop in blood pressure, which subsequently causes vasodilatation in the region of the tumor, liberation of pressor amines from the pheochromocytoma, and subsequent hypertensive overshoots. I think that is an acceptable idea for the moment. As far as the blocking agents are concerned, they block the peripheral action of adrenalin and nor-adrenalin, in the main. They may block sympathetic nerve impulses. Benzodioxane and regitine are the prime examples of the latter group. Other members of the same group are dibenamine and priscoline. There are a number of difficulties with these drugs, and I think that all of us are very much aware of them. But I might cite just a few examples at this time.

In the first place, we have a good number of false positives, particularly with the blocking type of drug. With regitine and benzodioxane, we have found that if the individual is uremic, we can get positive reactions in the absence of pheochromocytoma. Likewise, we find that false positive reactions are frequently found following barbiturates. Probably due to the blocking of regitine on sympathetic nerve impulses, we also find that at times a 5-mgm. dose of that drug, which seems to be a fairly standard one, may be enough to cause a certain degree of sympathetic blocking and a consequent lowering of the blood pressure. Under such circumstances, a lowering of the blood pressure is not due to neutralization or inactivation of circulating catechols. That phenomenon is probably not seen quite so often with benzodioxane, for it tends to act more specifically on reaction of adrenalin at the nerve endings.

In these tests, there is another false negative result that is becoming frequent, I think. Those of you who are familiar with the problem will recognize a certain amount of speculation here, but I think a brief explanation is justifiable. When, from any cause (for instance unilateral kidney disease or, we'll say, circulating catechols) hypertension has been present for a long time, other mechanisms in the body tend to take over its maintenance, and the hypertension can persist in the absence of the original exciting agent or cause. I think that is what happens in certain cases of pheochromocytoma. Namely, after the pheochromocytoma has been operating for a good while, other pressor agents or systems in the body take over, and the pheochromocytoma is no longer important in the sustained hypertension which we see. Therefore, when we use blocking agents to precipitate a drop in blood pressure, we are unsuccessful because the blood pressure is maintained by mechanisms other than those on which the drugs are effective. It is only an episodic rise that we can block with this material. That probably isn't true of all of them; but in certain cases which have sustained hypertension and in which we get false-negative results, I consider that the mechanism may be important.

You should also remember that these pharmacologic agents have a certain amount of danger attached to them. Most of the clinicians in this group have had experiences with the injection of histamine in the presence of pheochromocytoma. The results many times, to say the least, are startling. It is wise, therefore, to have on hand a blocking agent to stop these symptoms and signs when they have reached the diagnostic level. Likewise, benzodioxane in particular is not an especially good drug because it produces a large number of side effects. Tachycardia is prominent. The patients at times may become confused during the apex of the drug's effect. Likewise, at times, in patients who have hypertension not due to pheochromocytoma, one may see a rather alarming rise in the blood pressure.

The route of administration, I don't think I'll go into at the present time, except to say that regitine has fewer side effects than either of the other two agents and can be given intramuscularly with a fair degree of success. I think it is only fair to say at this point that most of us who are interested in pheochromocytoma are looking for a better means of diagnosing it. Recently there has been considerable attention paid to the possibility of measuring these catechols as they occur in the urine. Certain tests have been devised which do demonstrate these catecholamines to be present to a greatly increased degree in patients with pheochromocytoma, but in my opinion they are as yet impractical. When the tests have been perfected, these catecholamines may provide us a way of distinguishing the hypertension due to pheochromocytoma from hypertension due to other causes.

Further, we can anticipate trouble even with this test because we know that the pheochromocytoma does not send out large amounts of catechols all of the time. Patients seem to be excreting large amounts most of the time, but as I have said, it is probable that in some individuals the inciting mechanism has been pheochromocytoma, but other mechanisms are sustaining the hypertension. They will not have elevated catecholamines in their urine. Now, if that is the case, we are going to have false negatives here as well. But so far, there have been no false negative results in the patients who have been tested by this means.

Dr. Flocks: So, the pharmacologic tests were negative most of the time in this particular patient, but in spite of that fact, it was our feeling that he did have a left-sided pheochromocytoma, and exploration of that area was indicated. However, while he was being prepared for the operative procedure, he bent over in bed one evening, putting pressure on his left side as he recovered his cigarettes from the floor. Suddenly he developed what appeared to be a cerebral hemorrhage associated with a tremendous hypertension. He became unconscious, and a few days later he died, the terminal diagnosis being cerebral hemorrhage and a left-sided pheochromocytoma.

Dr. William Bean, Internal Medicine: May I say a word? Although your hypothesis, that he died because he massaged his adrenal and gave himself hypertension and a stroke, is certainly easily tenable, I think we should consider the possibility of an air embolus in someone who has had air put into his system—an air embolus that goes through into the brain. I agree that it is much less likely than your supposition, but we shouldn't overlook it, for if such an embolus can be detected clinically, one can help the patient by putting him in the Trendelenberg position and aspirating blood from his right ventricle. Occasionally the heart makes an awful racket, and you can tell if that is going on. I presume that didn't happen here.

Dr. Flocks: I think that Dr. Bean's comment is a very good one. There are two points that I wish

to make with regard to its application in this case, however. One is that we don't inject *air*; we inject *oxygen*. Second, the vascular accident occurred long enough afterwards so that the oxygen had been absorbed. Yet, we thought about the possibility and discussed it.

Dr. Jack Layton, Pathology: Even though it is considered a rarity, pheochromocytoma of the adrenal is now a well-established and widely recognized clinical-pathologic entity of dramatic character and vital importance.

Pheochromocytoma is a neoplasm of the chromaffin tissue; and although in about 90 per cent of the cases it is found in the adrenal medulla, in the remaining 10 per cent it occurs elsewhere in the body where chromaffin tissue is situated. In the latter instances, it may be called paraganglion. The tumors are usually benign, but about 10 per cent of them are malignant. Although they are usually considered to be distributed unilaterally, our autopsy figures tend to indicate that in perhaps nearly 20 per cent of instances they are bilateral.

The association with neurofibromatosis, which Dr. Leinfelder mentioned, is too frequent, we feel, to be fortuitous. These people quite often have neurofibromas in other sites than the eye.

In Smithwick's series of lumbosacral sympathectomies in 1,000 cases of persistent hypertension, with exploration of the adrenals, the incidence of pheochromocytoma was 0.5 per cent. It should be emphasized that these tumors can cause sustained hypertension as well as the paroxysmal type. Arteriosclerosis is not a constant accompaniment to the hypertension; and it is of interest to note that the sustained pressure, which may exist over many years, may not appreciably injure the arterioles.

The total duration of the untreated disease varies a great deal, anywhere from a few months to many years, depending upon the degree of secretory activity of the offending tumor. Death usually follows failure of the circulation, as evidenced by a profound state of shock or by massive pulmonary edema. In the more prolonged cases, particularly those in which the blood pressure becomes sustained, coronary occlusion or cerebral hemorrhage (as in this case) is the immediate cause of death.

It is vitally important that pheochromocytoma be recognized so that a cure may be possible.

Dr. Sahs: Was that one-centimeter tumor found in the right adrenal on microscopic or on gross examination?

Dr. Layton: It was found in the gross examination of this adrenal. It was noted that the adrenal was enlarged, and on section, the tumor was noted in the medulla.

Dr. James W. Culbertson, Internal Medicine: Can you say whether or not the perirenal fat showed the characteristic brown coloration described by Smithwick? If this observation is consistent, and if one finds brown perirenal fat but no tumor on the side being examined surgically,

he should explore the opposite side. Let me remark further that Howard, of Johns Hopkins, has studied the occurrence of bilateral pheochromocytoma and reported on a number of cases. He has shown an apparent familial tendency. Thus, if one is lucky enough to prove bilateral pheochromocytoma in one individual, it seems worth while to investigate the patient's relatives.

Dr. Layton: The protocol does not mention whether or not the fat was brown.

Dr. Culbertson: When I looked at the clinical photograph, I couldn't tell whether it was brown or not, but it didn't look bright yellow.

SUMMARY OF NECROPSY FINDINGS

At autopsy, pheochromocytomas were found in both adrenal glands. The 110-gram tumor involving the left adrenal was a bilobulated, spherical mass perched above the left kidney, with an atrophic remnant of adrenal tissue mediad. The mass was encapsulated and separated from the kidney by fibroareolar and adipose tissue. The right adrenal was enlarged to inspection, and a tan-and-gray 1-cm. tumor was present in the medulla. This neoplasm was clearly demarcated from the rest of the adrenal tissue. The heart was enlarged (600 grams) with preponderant hypertrophy of the left ventricle. A mural thrombus was present in the right auricle. Severe atherosclerosis was present in many arteries, but especially in the coronary arteries and the abdominal aorta. Passive congestion of the liver, spleen, and kidneys was noted. Both lungs were edematous, and patchy bronchopneumonia was present in the base of the right lung. The brain was swollen and edematous, and weighed 1900 grams. A 5-cm. area with hemorrhage, necrosis and cavitation was observed in the right temporal lobe. Scattered areas of ischemic necrosis were present in the cerebrum, and extravasated blood was found in the ventricular system and in the tissues of the brain stem. The cerebral vessels were quite sclerotic. Necrosis and small areas of hyalinization were noted in the anterior lobe of the pituitary gland.

NECROPSY DIAGNOSIS

Pheochromocytoma, adrenal, bilateral.

Massive intracerebral hemorrhage and extensive early encephalomalacia.

Bronchopneumonia with congestion and edema, bilateral.

Advanced atherosclerosis, aorta and coronary arteries.

Cardiac dilatation and hypertrophy.

Necrosis, pituitary gland.

Arteriolonephrosclerosis, mild.

Chronic passive congestion of liver, spleen and kidneys.

Dr. Flocks: Before opening the general discussion, let's present the real problem of the removal

of the tumor. What happened to this patient when he leaned over to get the cigarettes can happen in the operating room when one is manipulating the patient to get him onto the operating table, into position, anesthetized, and so on. A team is necessary in the operating room, and the patient has to be prepared specifically at the time of the operation.

Dr. Tidrick will discuss the problems connected with the exposure, especially the necessity for bilateral exposure.

Dr. Robert Tidrick, Surgery: The exposure needs to be completely adequate, for it is easy to deceive oneself about palpating the adrenal. It is small, soft and hidden in perirenal fat. One needs a long incision with an adequate number of well-motivated people on the ends of the retractors to give the surgeon an opportunity to visualize the adrenal in its entirety. I have no faith at all in blind methods of approaching the adrenal. It is dangerous merely to palpate and thus to deceive oneself about whether there is an adrenal tumor or not. But it is especially dangerous to pass the honor around to all members of the team, for death has been known to occur from adrenal failure and from bilateral adrenal hemorrhage following such a traumatic episode. So—and I am very serious—in such instances the surgeon should be utterly selfish and do the operative procedure, as regards the palpation and examination itself, without having any undue manipulation. Of course, if there is a pheochromocytoma present and the tumor is massaged, one is likely to create a crisis of the type described in the patient under consideration today, one which Dr. Kirkendall and his colleagues may not be able to block with the two agents discussed. As for the anatomic approach, the side approached first, of course, should be the one in which one suspects the tumor. In positioning the patient for that, one has to consider whether he will approach both adrenals at the same operation. If so, the patient may be placed on his face, and the approach can be made from two different incisions in the back. To me, this seems more hazardous, for it doesn't give as wide an exposure on either side, and the anesthesiologist and the internist who are helping have greater difficulty, since, if the patient does have a crisis, they find it harder to maintain airway and do the other resuscitative measures which are so necessary.

It seems to me that it is safer to operate with the patient on his back. Then, if a simultaneous approach is to be made on both sides, one can make a long and generous incision starting in the interspace between the twelfth and eleventh ribs on the right, intersect the oblique musculature on the right in muscle-splitting manner as much as possible, go across both rectus sheaths and muscles, undertake similar muscle splitting on the left, and down, ending up on the left side between the tenth and eleventh ribs. Now, that makes a long

and laborious incision to close, but if one remembers the adage that in general healing takes place from the sides and not from the ends, he'll realize that it won't make much difference. Then, after one has made the approach, he must, of course, go through the posterior peritoneal peritoneum on the right side. The procedure involves the deflection of the duodenum medially and appropriate exposure of the right kidney, which is very easy. Gentle traction of the kidney downward, retraction of the right lobe of the liver superiorly, and the adrenal is right there. Now, on the left side there is a little more difficulty, owing to the fact that there are several other structures with which one must deal in that area. One can either go through the hepato-gastric omentum or go through the gastrocolic omentum. Personally, I prefer the gastrocolic, opening the lesser peritoneal sac and identifying the left kidney, the body of the pancreas, and the splenic artery and vein. These latter structures are retracted superiorly, i.e., the surgeon goes gently up behind the pancreas. Then, the kidney is drawn inferiorly, and the left adrenal is approached in that way. Now, that is not too difficult. If, however, the perirenal air studies have shown the likelihood of one's encountering a large tumor, I think a different exposure is indicated. One should make a unilateral approach, resect the eleventh rib in its entirety, usually open the pleura of the diaphragm at its inferior posterior attachments—and I refer particularly to the left—and extend the incision to the midline of the abdomen. Now, that is a very large incision, but it is justified in that it provides a means by which one can adequately expose the entire area and get such a large tumor as was found in the patient under discussion, without the grave hazards of difficult hemorrhage. The approach which I have just described is especially desirable in the operative treatment of patients with Cushing's syndrome, because of the mechanical difficulties associated with obesity.

Dr. Flocks: The important thing that Dr. Tidrick has emphasized is the advisability of having the patient in such a position that the team as a whole can take care of the crises that may occur and of enabling the surgeon to get the exposure necessary for the removal of the tumor with as little manipulation as possible. Now Dr. Levy, of the Department of Pharmacology, has the results of some bio-assays of tumors such as this.

Dr. Louis Levy, Pharmacology: Dr. Schueler ran these bio-assays, but since at the moment Dr. Schueler is in Italy, I am speaking for him. He analyzed for epinephrine and nor-epinephrine in the tumor tissue with a bio-assay technic involving dog blood pressure and reversal by priscoline. He found essentially normal proportions of epinephrine and nor-epinephrine. The proportion of epinephrine to nor-epinephrine was what one would find in normal medullary tissue, and that is about 75 per

cent epinephrine and about 25 per cent nor-epinephrine. In cases of pheochromocytoma, the reverse is usually seen, i.e., there is more nor-epinephrine than epinephrine in the assays of adrenal medullary tissues.

The methods for analysis of these tissues have been in quite a bit of dispute, as Dr. Kirkendall has mentioned. However, in the more recent journals one finds descriptions of methods for urinary analysis which are rather specific and show possibly 50-fold increases of catecholamines in the urine of patients with pheochromocytoma. Dr. Goldenberg* has reported on this in the *AMERICAN JOURNAL OF MEDICINE*, saying that he has found no false-positive results with the research procedure that he has used.

Dr. Flocks: The significant points in this discussion seem to me to have concerned the problems posed by the pharmacologic tests, which thus far have proved relatively inadequate and uncertain, and possibly the matter brought up by Dr. Kirkendall and Dr. Levy concerning the study of the urine.

* Goldenberg, M., Serlin, I., Edwards, T., and Rappaport, M. M.: Chemical Screening Methods for the Diagnosis of Pheochromocytoma. I. Nor-epinephrine and Epinephrine in Human Urine. *Am. J. Med.*, 16:310-327, (March) 1954.

SESSION ON HEART DISEASE ANNOUNCED

Dr. Irvine Page, Cleveland, President-elect of the American Heart Association, will be a featured speaker at the Second Annual Joint Scientific Sessions of the Iowa and Nebraska Heart Associations at the University Hospitals in Iowa City, Saturday, December 4. Dr. Page will speak on hypertension.

Other speakers and their topics will include Dr. Richard Varco, Professor of Surgery at the University of Minnesota, "Surgical Aspects of Peripheral Vascular Disease"; Dr. David I. Abramson, Assistant Clinical Professor of Medicine, University of Illinois, "Medical Aspects of Peripheral Vascular Disease"; and Dr. William Bean, Head of the Department of Internal Medicine, State University of Iowa, "Clinical Vagaries of Myocardial Infarction."

A panel on the current status of cardiac catheterization will be chaired by Dr. Robert Grissom, Omaha, and Dr. F. Lowell Dunn, Omaha, will moderate a panel on peripheral vascular problems.

Registration and film showings will begin at 9 a.m.

Physicians desiring to do so may tour the Cardiovascular Laboratories at the University Hospitals immediately following lunch.

Dr. James W. Culbertson, in charge of local arrangements, is also planning a social hour and dinner at an Iowa City club following the close of the day's sessions.

Co-sponsoring the joint-sessions this year will be the Division of Gerontology, Heart and Chronic Disease of the Iowa State Department of Health.

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LET THE NURSE HELP

The shortage of nurses certainly is regrettable, but none of us ought merely to regret it. Rather, we should search out its causes and, in so far as is possible, find some remedies or palliatives and attempt to apply them.

Everyone knows, of course, that hospitalization is on the increase, that nurses nowadays are working fewer hours a week than they used to do, that nurses, quite like other women, give up their jobs when their husbands are transferred from town to town, and that they need at least occasional furloughs to have babies and to care for them. Those circumstances are irremediable.

But there is another need that nurses have—one that frequently plays a part in determining whether they continue active in their profession, and one that physicians have a major share in meeting. Economists call it "psychological increment," but it can a whole lot more understandably be termed "job satisfaction" or "the sense of being needed." Nurses are anxious to continue working under our direction and supervision only if they are given continual opportunities to be more than our handmaidens and errand girls. And when they have been informed about what we are trying to do for each patient and how we expect to accomplish our objective, they can help in ways that benefit the sick very considerably.

In a guest editorial in the October issue of the VIRGINIA MEDICAL MONTHLY, a nurse, Miss Roy C.

Beasley, reminds us that specific questions or perhaps ill-defined fears occur to patients after the doctor has left the bedside, and that the nurse feels handcuffed if she can offer no more help than the vague and bland reassurance, "You're going to be all right."

In some circumstances, such as in reassuring the frightened preoperative patient, Miss Beasley grants that the nurse can be sure of what to say because the procedure that the doctor will follow has become pretty well routinized. "The understanding nurse," she says, "gives the patient a chance to talk of his fears, and she tries to make him see that his apprehension is not unusual. She explains that the patient will receive medicine the day of the operation to make him relax and that when he returns from the operating room he will awaken in the oxygen tent which will aid in supplying oxygen to his body and thus decrease the strain upon his vital organs."

But, she points out, "This need for explanation is equally important for medical patients and for all stages of the patient's treatment, convalescence and discharge." The nurse can help, and she *wants* to do so. It is for that purpose that she undertook her training. But she can't do a job that is either satisfying to herself or maximally beneficial to the patient unless the doctor has taken her into his confidence.

PSYCHIATRISTS SEEK AID

Physicians, both as a class and as individuals, provide many paradoxes. Among their membership, there are those who maintain that every doctor is a *prima donna*, and do not resent having that label applied to themselves. They seem, however, to have one trait in common not generally shared by the rank and file of the world's workers, and that is a contentment with their chosen profession. The lawyer may wish he had been an engineer; the engineer that he had gone in business; the businessman that he had been an artist on some faraway island; and so on, *ad infinitum*. The doctor, though, usually is content with his own profession, and if he has specialized, he almost invariably feels that his is the most important segment of medicine. No other field looks greener.

He wishes men in other fields would give more recognition to the importance of his own specialty. The members of one group, in fact, the psychiatrists, go so far as to ask that pediatricians, internists, surgeons and general practitioners help them by utilizing some of the less complex forms of diagnosis and therapy in cases of mental illness.

Although we suspect successful doctors throughout the ages have realized the importance of good mental health and have worked to bring it about in their patients, mental health is one of the newer branches of medicine. It sometimes appears that

as he has come to recognize the entity, the general physician has become unduly apprehensive about his ability to deal with it successfully without special training.

More power, then, to the Mental Health Committee of the State Society, for it feels every doctor can help in recognizing the early signs of mental illness and can aid in restoring such patients to a better state of mental health. The Mental Health Committee of the State Society is an excellent one. Its members are practical and down-to-earth. They believe in a preventive program that will eliminate much of the need for prolonged psychiatric treatment. At times it is true, they have felt that they were the only ones deeply concerned with the problem. They felt that the rest of the medical profession paid too little attention to mental health and discounted its importance.

More power, too, to the general practitioners who confronted the Committee with the statement that 25 per cent or more of their patients were either wholly or partially the victims of mental illness, and who asked for help in treating them. It was a most salutary experience to hear a number of general practitioners voice their recognition of the seriousness of the problem and ask for assistance in meeting it. It was an indication that many physicians are recognizing the importance of mental illness and are trying to do something about it.

It was also good for the general men to find that the psychiatrists were more than eager to provide them the help they wanted. Pet projects of the Committee, dreamed about as future possibilities, may become realities as a result of this meeting of several groups.

Concretely, the Committee on Mental Health will at once inaugurate a monthly column in the JOURNAL. This will state concisely each of the early danger signals of various types of mental illness, suggest elementary methods of treatment, and review other pertinent pieces of information that the Committee feels will be valuable to the readers. Probably only one subject will be discussed each month, but it is hoped that the column can assist the family physician in this field of his practice, telling him what to look for and what should be done about treatment.

There are some 71 psychiatrists in the state, about 45 of whom are especially trained in their field. That's too few. They feel they have a very important role in preventive as well as therapeutic medicine, and they are "sold" on their specialty. They are, however, more than willing to share their knowledge with their colleagues. They are convinced that mental illness must be cared for in general hospitals so that all physicians may become more familiar with it and so that they may be encouraged to shed their apprehensions about their own ability to deal with it.

Maybe the grass is just as green on both sides of the fence, and the answer is to remove the fence.

LABORATORY STUDY OF THYROID FUNCTION

Laboratory studies in the diagnosis of thyroid disease have included study of basal oxygen consumption, protein-bound iodine, radioiodine uptake and serum cholesterol. Of these, the last named is probably not a very reliable measure of the level of thyroid activity, and its chief use is in following response to treatment of hypothyroidism. Radioiodine-uptake studies usually show quite good correlation with the true state of thyroid function. Radioactive materials and the facilities and skills required for their use are available only in a few centers, however. In addition, the repeated use of test doses of radioiodine exerts some irradiation effect on the gland.

Basal metabolic rate and protein-bound-iodine studies have neither of the limitations which radioiodine-uptake studies have. The latter give a good estimation of the concentration of the thyroid hormone in the circulating blood stream. This concentration is increased in some conditions other than hyperthyroidism, but in general, the level of protein-bound iodine is a fairly close index of thyroid activity. The results obtained apparently have much better correlation with the true thyroid state than can be achieved with serum-cholesterol studies.

The classic determination of the basal rate of oxygen consumption probably is much more widely used than any of the others. There are some disadvantages, however. The apparatus must not allow any leaks of oxygen, and the patient must cooperate fully. Basal conditions are difficult of attainment, and considerable proficiency is required of the person who performs the test. Certain types of patients, especially those in heart failure, with a fever or with some concomitant disease, or those emotionally upset or psychotic cannot be given a satisfactory test.

The determination of protein-bound iodine can be done with a minimum of cooperation from the patient and is just as significant in patients who present the conditions enumerated above as it is in those with thyroid disease alone. The amount of organic iodine bound to serum protein furnishes very valuable information as to the concentration of thyroid hormone in the circulation. The levels are, of course, obscured by the administration of iodine to the patient either as a therapeutic agent or as compounds administered for roentgenographic visualization. These compounds (such as Lipiodol) may be retained in the body, and the organic iodine is absorbed into the blood stream over long periods of time, thereby greatly increasing the level of iodine bound to protein in the serum, quite apart from the thyroxin concentration.

The procedure in the laboratory is a long, complicated and exacting one. The facilities are usually found only in the larger laboratories, but the services of some of these laboratories are available

on a "mail in" basis to physicians practicing at a distance. The amount of special care required for proper handling of the sample is not great.

The results of the analysis are given in micrograms (1,000 micrograms equal 1 milligram) per 100 ml. of serum. The range of normal is fairly narrow: 3.4-8.0 micrograms per 100 ml. of serum. The vast majority of patients in hyperthyroid and hypothyroid states will have concentrations well outside of this range.

The point being made is not that protein-bound iodine determination should replace any other method of studying the level of thyroid activity. The simplicity, value and availability of this test, nevertheless, are to be stressed. Distance from a laboratory which provides this service is no real deterrent to its use.

DISTRICT INTERPROFESSIONAL MEETINGS

Each year the Iowa Interprofessional Association holds district meetings over the state in order to bring to as large a number of members as possible a greater knowledge of what the Association is trying to do. This year the program will consist of an explanation of the legislative objectives of each of the six professions represented—medicine, dentistry, pharmacy, veterinary medicine, nursing, and hospitals. The legislative chairmen of the different associations have met together to work out a unified program which will explain what the individual organizations are striving for, as well as give a good picture of what they envision in health improvement for the people of Iowa.

Meetings will be held as follows:

Nov. 8—Sheldon	Nov. 15—Washington
Nov. 9—Denison	Nov. 16—Oelwein
Nov. 10—Red Oak	Nov. 17—Charles City
Nov. 11—Oskaloosa	Nov. 18—Webster City

The veterinary and hospital associations are in charge of arrangements this year, and members of those two groups will serve as local chairman and co-chairman. Representatives of the other professions will also serve on the local committees. Medical men who have agreed to serve are Dr. G. E. Vermeer, of Sheldon, Dr. R. M. Johnson, of Denison, Dr. Oscar Alden, of Red Oak, Dr. G. W. Bennett, of Oskaloosa, Dr. G. E. Montgomery, of Washington, Dr. R. S. Jaggard, of Oelwein, Dr. E. V. Ayers, of Charles City, and Dr. B. F. Howar, of Webster City.

It is urged that duly elected members of the new legislature be invited to attend the meetings nearest them. Since the program will be a discussion of legislative matters, the meeting will afford an excellent opportunity to acquaint the legislators with the aims of the Association.

In the past, interest in the meetings has been very good and with a legislative session approaching, it is expected that there will be a very large attendance this year.

LEST WE FORGET

Dr. Merrill D. Prugh, president of the Ohio State Medical Association, has put together a list of physicians' objectives that seems pretty good to us. "To be good doctors," he says, "we must:

"1. Give good medical service.

"2. Make our services available at all times to all who need them.

"3. Make our fees fair to both the patient and the doctor.

"4. Make our personal interest in the patient known to the patient.

"5. Treat both patients and fellow practitioners as we would like to be treated.

"Those may be old, but," he reminds us, "so is the best rule of human conduct ever given, namely, The Golden Rule, and in 2,000 years no one has been able to give us a better one.

"If we will do these few simple things," Dr. Prugh believes, "public relations will be no unsolved problem and socialized medicine no threat. We will have the respect of the public and best of all, our own self-respect."

MINUTES OF MEETINGS OF STATE SOCIETY OFFICERS AND COMMITTEES

COMMITTEE ON PUBLIC HEALTH

September 29, 1954

The Committee on Public Health met in the central office Wednesday morning, September 29, 1954, with the following members present: Doctors E. A. Larsen, of Centerville, chairman of the large committee; E. G. Zimmerer, of Des Moines, and J. R. Dewey, of Schaller, of the Cancer Subcommittee; D. A. Glomset and A. Gelperin, of Des Moines, J. F. Kanealy, of Cedar Rapids, and C. O. Adams, of Mason City, (Chronic Illness); C. P. Phillips, of Muscatine, Charlotte Fisk and Madeline Donnelly, of Des Moines, (Maternal and Child Health); J. I. Marker, of Davenport, and L. B. Rausch, of Sioux City, (Mental Health); H. R. Henstorf, of Shenandoah, and D. H. Coughlan, of Des Moines, (Industrial Health); R. H. Heeren and Leon J. Galinsky, of Des Moines, William Spear, of Oakdale, and E. B. Floersch, of Council Bluffs, (National Health Associations); and B. F. Howar, of Webster City, R. S. Jaggard, of Oelwein, and J. W. Gauger, of Early, (Rural Health). Mary McCord served as secretary.

The meeting was called to order at 10:00 a.m. by Dr. Larsen; the persons in attendance introduced themselves; and the minutes were read and approved. The Cancer Committee reported no meeting had been held, and there was some discussion of using cancer funds for continuance of the x-ray testing program which turns up some cancer-of-the-lung suspects. No action taken.

Dr. Marker reported on the first AMA meeting

on mental health held in Chicago earlier this month, and pointed out the need for more coverage of the state psychiatrically. Mobile clinics may be the answer and should be considered. Every doctor should be oriented in mental health, for it involves everyday living. Alcoholism is a problem and must be studied. The Iowa Mental Health Authority should be legalized in the coming legislature so that it will be eligible for federal and state funds. There is a definite need for the work it does.

A lengthy discussion followed the report of the Committee on Mental Health, most of the other physicians present stating their need for more help with their mentally ill patients. They estimated at least 25 per cent of the patient load involved some mental illness and they felt at a loss as to how to handle it best. The Committee felt that the general practitioners could help their own patients a great deal, but said they must learn to charge for the time they spend on the patient, since mental illness will require much more time than a routine physical examination.

Dr. Glomset reported on the cooperation extended by members of his subcommittee to the nursing-home group, and said he felt the two should work together closely. Dr. Gelperin seconded Dr. Glomset's view and told of what had been done in Polk County, also of what other counties could do. He was particularly helpful in telling the procedure to be taken in trying to get things done in the smaller counties.

Dr. Howar reported for the Rural Health Committee, saying 44 physicians have located in Iowa in the past three months. He said the Committee had surveyed many communities asking for a physician, and would continue to do so, and also to talk to doctors looking for locations. It will also meet with the Farm Bureau and with the Extension Service of Iowa State College on a cooperative program.

Dr. Coughlan reported for the Industrial Health Committee, saying its manual was about ready for final approval, and that work should be started on the regional institutes that have been contemplated.

Dr. Phillips reported for the Maternal and Child Health Committee, stressing the need for the State Society to take a larger part in the school health program.

Dr. Heeren reported for national health organizations, the program being one of cooperating with such organizations.

The meeting adjourned about 3:00 p.m.

SUBCOMMITTEE ON MENTAL HEALTH

September 29, 1954

The Subcommittee on Mental Health met following the Committee on Public Health.

In addition to the men who had represented the Committee at the preceding session, Doctors J. D. Mahoney and H. C. Merillat were present at this meeting.

The Committee discussed the fact that the fall television program includes no talks on mental health, and asked that a place for the subject be arranged when the spring series is planned. It voted to prepare a monthly column on some phase of mental health for the JOURNAL; authorized Dr. Marker to meet with the State Society's Legislative Committee; and decided to hold its next meeting in Omaha on October 23, at 10:00 a.m.

The meeting adjourned about 4:00 p.m.

BE A THERAPEUTIC SKEPTIC

It would appear at times that we have completed a cycle of therapeutic practices, starting with the premise of empiricism, passing through a period of relative nihilism, only to return to more empiricism. During the past 35 years, we have been deluged with so many alleged specifics—many of them actual—that adherence to a "spirit of active skepticism" has been difficult. Nevertheless its need is evident. Have we slipped back into the practice of giving medicine rather than treating the disease? Have we not, perhaps, stressed the administration of wide spectrum antibiotics to the detriment of accurate diagnosis? Now that we have so many good drugs with which to treat disease, have we not relied on shotgun management of the problem rather than finding which specific drug would do the job best?

Should we not ask ourselves if, by unrestrained practices of this sort, we are losing some of the scientific approach to treatment that is necessary for good medical practice? Because of our excellent therapeutic agents, drugging is more effective now than it was in Osler's day, but this fact detracts little from his statement: "In the fight which we have to wage incessantly against ignorance and quackery among the masses and the follies of all sorts among the classes, diagnosis, not drugging, is our chief weapon for offense." Some of us are too prone to administer drugs first and to diagnose later—that is, if the first salvo of drugging is ineffective.

To be more specific, the following suggestions can be listed:

Diagnostic procedures perhaps can shorten an illness and eliminate expense stemming from indiscriminate drugging.

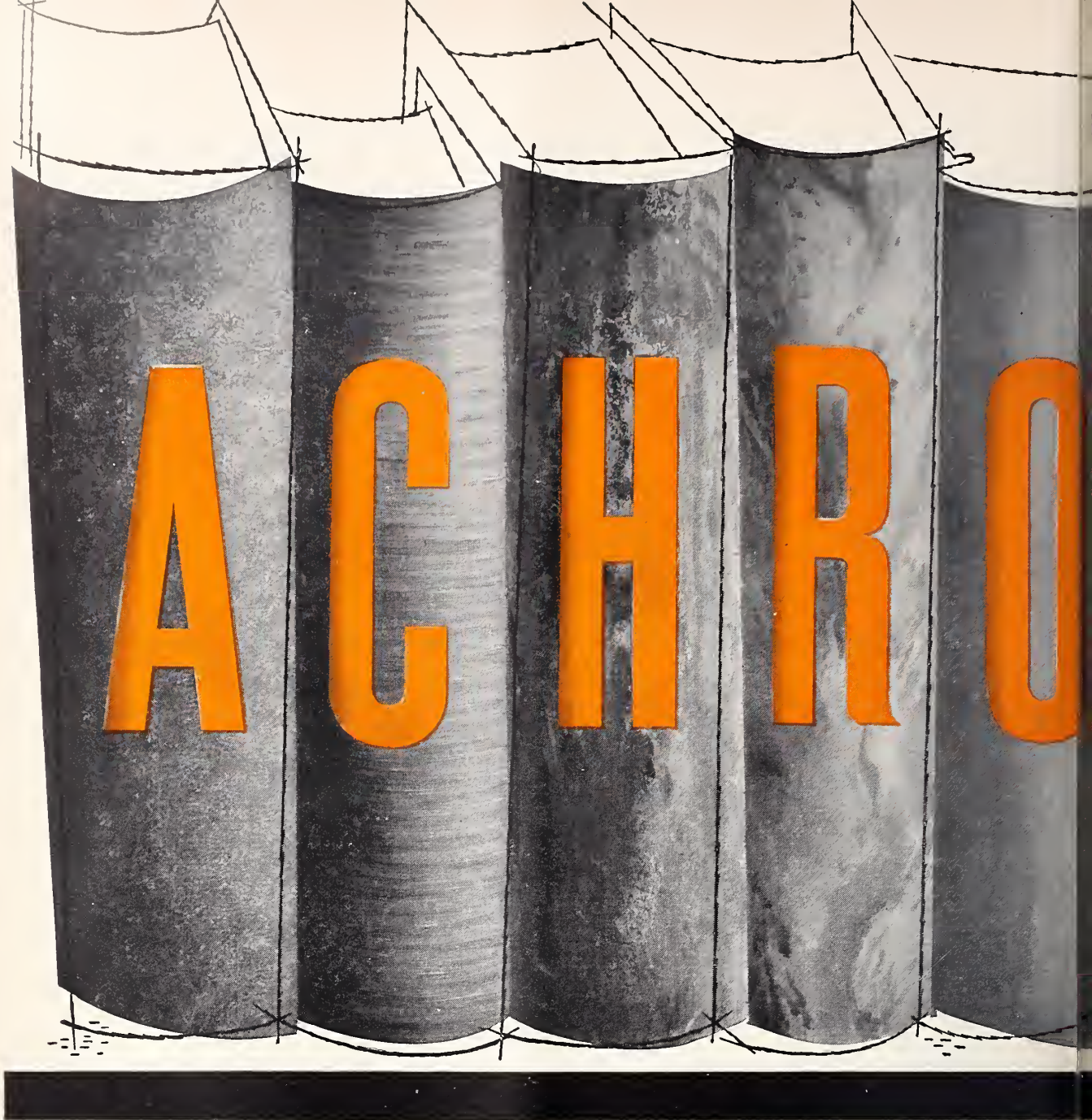
A clear understanding of the patient's illness and of the pharmacodynamics of the agent are necessary.

Too early and indiscriminate surgery, x-ray therapy or drugging may cloud an already cloudy picture.

Our modern philosophy that doing *something* is a step in the right direction does not always hold true. In certain instances, "tincture of time," might be encouraged.

More time spent in listening to the patient's story or examining him and less time used in writing prescriptions, giving shots, or writing orders on the chart probably will result in better medical practice.

Finally, therapeutic nihilism should not be our aim: rather, we should remain steadfastly against the misuse of our new-found medications. By so doing, our patients will be safeguarded, our profession will avoid criticism, and we physicians will gain in stature in the eyes of those who follow us.—Wm. H. Gordon, M.D., in the October, 1954, TEXAS STATE JOURNAL OF MEDICINE, pp. 692-693. (Abstracted.)



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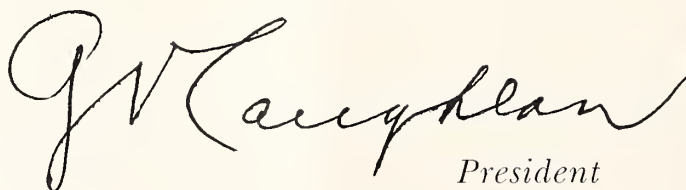
President's Page

As the end of the year approaches, each of us should consider a worthy cause to which he may wish to give his financial support. One important fund in which doctors of medicine should be interested is the American Medical Education Foundation.

No physician has ever paid the entire cost of his medical education. If he attended a tax supported institution, the taxpayers paid some of his expenses. If he went to a private school, philanthropists helped him over the financial hump.

A plea is being made now to physicians to donate to the Foundation and the opportunity is being given them to earmark their donations for the benefit of the schools from which they graduated.

You will feel a great sense of satisfaction if you make such a donation. You will be helping the school that gave you the opportunity to practice medicine in the greatest country in the world, and you can deduct the amount from your taxable income.

A handwritten signature in cursive script, reading "J. W. Laughlin". The signature is fluid and elegant, with the first letters of each word being capitalized and prominent.

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Executive Secretary—Mrs. Elizabeth B. Nelson, 3600 Franklin Ave., Des Moines

ANNUAL MEETING

The formal postgraduate course and Annual Meeting was held in Des Moines September 22 and 23. One hundred thirty members and 19 non-members were registered, including Dr. P. R. Blodgett, of Chicago Heights, Illinois, president of the Illinois Chapter. Those who were present enjoyed and benefited from the scholarly, yet practical, presentations. This was one of our finest postgraduate courses and sets a standard for future programs.

Frank D. McCarthy, M.D., assumed the presidency. The newly elected officers were:

William M. Sproul, M.D., President Elect

C. A. Nicoll, M.D.—Vice President

Donald H. Kast, M.D.—Secretary-Treasurer

Loran F. Parker, M.D.—Director

Thomas L. Ward, M.D.—Delegate to A.A.G.P.

L. H. Jacques, M.D.—Alternate Delegate to A.A.G.P.

Our purpose is to present the finest postgraduate courses obtainable and have presentations that are understandable as well as educational. These courses are open to all doctors of medicine, and again we extend invitations to all to attend our educational sessions. To Iowa Academy members, registration is free; to non-members, the charge is \$5.00. A good suggestion is for you to mark your calendar now for the meetings ahead.

COMING PROGRAMS

State

- Nov. 4, 1954 Hotel Montrose, Cedar Rapids
"Diabetes"
Priscilla White, M.D., Joslin
Clinic, Boston, Massachusetts
"Pediatric Problems"
Lee Forest Hill, M.D., Chief of
Pediatric Staff, Blank Memo-
rial Hospital, Des Moines,
Iowa
- Jan. 20, 1955 Iowa Methodist Hospital, Des
Moines, Iowa
Program by Staff of Iowa Meth-
odist Hospital
Guest speaker—M. Edward Davis,
M.D., Chicago, Illinois

Apr. 24-27, 1955 Des Moines, Iowa

Iowa State Medical Society
Annual Meeting

May 19, 1955 A Lederle Symposium on "Heart
Disease"

Complete program to be an-
nounced later

National

Mar. 28-31, 1955 Los Angeles, California

American Academy of General
Practice, Annual Meeting

See program in September GP,
page 164

Hotel reservation form in the
October GP

Make your reservation now

WHY ACADEMY MEMBERSHIP

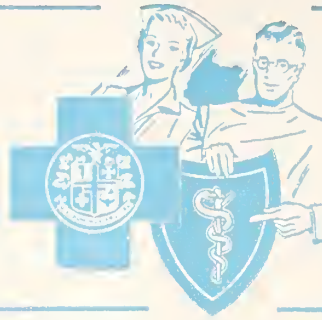
Occasionally these questions are asked: "Why belong to the Academy?" "What will belonging do for me?" "Why have another medical society? We have too many now." These can best be answered by quoting to you the objects and purposes of the organization. They are:

1. To promote and maintain high standards of the general practice of medicine and surgery;
2. To encourage and assist young men and women in preparing and qualifying for, and establishing themselves in general practice;
3. To preserve the right of the general practitioner to engage in medical and surgical procedures for which he is qualified by training and experience;
4. To assist in providing postgraduate study courses for general practitioners, and to encourage and assist practicing physicians and surgeons in participating in such training;
5. To advance medical science and private and public health.

We are banded together for the purpose of improving ourselves and for raising the standards of general practice to a point where each of us can truly be a Family Physician. This can be done on an individual basis, but it is rarely ac-

(Continued on page 537)

BLUE CROSS



BLUE SHIELD

Doctors Guide Blue Shield's Destiny

Many doctors throughout the state had expressed their desire to the leaders of medicine, to the directors of Blue Shield, and to field personnel of the Physician Relations Department that Blue Shield should prorate fees. Thus, on July 25, the Blue Shield Board established a mechanism for making proration possible. Information about the new concept is about ready for release to doctors who request it.

The way in which this new development was brought about is an excellent example of the control which doctors exercise over their surgical-medical Plan.

Blue Shield is the "Doctors' Plan," rather than just another insurance company, for the following reasons:

1. It was created by the doctors through their Iowa State Medical Society at their House of Delegates meeting in 1944, to meet the demands of the public for a method to budget for medical care, rather than submit to a compulsory national health program.

2. Blue Shield was organized by doctors of medicine and is guided by doctors through medical representation from each councilor district. Therefore, doctors control the policies of Blue Shield. They do not have a voice in commercial insurance-carrier operations.

3. Doctors organized the Plan under a special non-profit enabling act, with no stocks, dividends or rebates being payable to the doctors. Board members serve without pay. Blue Shield subscribers, therefore, receive maximum benefits for each premium dollar invested.

4. Blue Shield is the only plan that provides the "full service" concept for low-income families. The government took the position, ten years ago and less, that indigent, medically indigent and low-income families needed governmentally financed aid, and that the only solution was nationalization of medicine. The doctors said that they could handle the problem through the "service principle," without governmental intervention. Blue Shield was their answer.

5. There is also the concept of making available continuous coverage, regardless of changes in employment, in health or in physical condition, in type or location of work or residence. Blue Shield permits persons to continue coverage even after age 65, or when they retire. These principles are not usually to be found in commercial insurance policies.

6. Traditional insurance companies do not look at the problem of health through the eyes of the community, the hospital or the physician. They do not attempt primarily to meet the total community need, nor do they try to meet the needs of those who render the service. Blue Shield attempts to do both.

7. The Blue Shield Participating Physician receives his check direct from Iowa Medical Service. Commercial insurance carriers usually pay the subscriber.

Blue Shield is the "Doctors' Plan." It is the doctors' best public-relations tool.

SHOULDN'T THE DOCTOR EXERCISE ULTIMATE CONTROL OVER THE DESTINY OF VOLUNTARY HEALTH CARE IN THE UNITED STATES? He can through Blue Shield.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

CEREBRAL ANOXIA, by *Cyril B. Courville*, M.D. (Los Angeles, San Lucas Press, 1953. \$6.50).

CEREBRAL PALSY, by *Cyril B. Courville*, M.D. (Los Angeles, San Lucas Press, 1954).

THE MANUAL OF ANTIBIOTICS, by *Henry Welch*, Ph.D. (New York, Medical Encyclopedia, Inc., 1954. \$2.50).

NERVOUSNESS, INDIGESTION AND PAIN, by *Walter C. Alvarez*, M.D. (New York, Hoeber-Harper. \$3.50).

GERIATRIC NURSING, by *Kathleen Newton*, R.N., M.A., Second Edition. (St. Louis, C. V. Mosby Company, 1954. \$4.75).

THE YEAR BOOK OF PEDIATRICS (1954-1955 YEAR BOOK SERIES), ed. by *Sidney S. Gellis*, M.D. (Chicago, The Year Book Publishers, Inc., 1954. \$6.00).

THE YEAR BOOK OF GENERAL SURGERY (1954-1955 YEAR BOOK SERIES), ed. by *Evarts A. Graham*, M.D., with a SECTION ON ANESTHESIA, by *Stuart C. Cullen*, M.D. (Chicago, The Year Book Publishers, Inc., 1954. \$6.00).

BOOK REVIEWS

ART AND PRINCIPLES OF ANESTHESIA, by *Phyllis A. Roberts*, R.N., and *L. C. Nelson*, M.D. (St. Paul, Northland Press, 1954. \$3.00).

Since this book was written by a nurse anesthetist in collaboration with a general surgeon, and since no anesthesiologist had a hand in it, it is to be assumed that it was written primarily for nurse anesthetists. If such is the case, it can serve a very useful purpose.

Part One describes very well what should be expected of a nurse doing this type of work—her role in the operating team, her responsibilities and the things she should know and do to provide good anesthesia. In this section of the volume, the author, probably unintentionally, points out the amount of control which a lay administration of a hospital can exert on salaried employees rendering medical services, since she refers several times to things which the hospital will or will not permit her to do. Her qualifications and abilities ought, rather, to be judged by professional staff members, not by administrative personnel.

Part Two, entitled "Technics in Surgical Operations," describes adequately the indications, operative procedure, condition of the patient, preoperative preparation, selection of the agent, position of the patient, anesthesia management and the hazards in each of a large number of operations. This is a distinct change from the usual method of presenting the subject. Naturally it has not been possible for the author to cover all of the many operative procedures in this way, but the scheme is adequate for the purpose of the book. Of course considerable repetition has resulted.

The signs of anesthesia are well described in a separate chapter. A short chapter on intubation tends to give the impression that the procedure is much simpler than it actually is.

Everything considered, the book is well written and should be of considerable help to the nurse anesthetist. It is also to be recommended as good reading for surgeons, who often do not understand the problems that a nurse anesthetist has to face.—*E. P. Lovejoy*, M.D.

THE TREATMENT OF THE ALCOHOLIC, by *Fritz Kant*, M.D. (Springfield, Illinois, Charles C Thomas, 1954. \$3.50).

Each year additional volumes dealing with the problem of alcoholism make their appearance. That fact, in itself, is evidence both of an increasing awareness of this too long neglected problem and of a growing interest in it. Dr. Kant's book—114 pages of text material—presents a concise and readable technical approach to the problem.

Despite its brevity, both the depth and scope of its coverage and the expressed intent of the author make it a work that should be of particular value to the general practitioner. Besides physicians, it may be helpful to judges, ministers and social workers. But it is probable that alcoholics themselves would profit little from reading it.

The volume can perhaps be criticized as a resource on the grounds that the statistics it presents are neither up to date nor satisfactorily documented. On page 6, for example, one finds the statement, "One half of the convictions for crimes of violence can be traced to the influence of alcohol as one important contributing factor," yet no source for this information is cited. Figures are quoted for the state of New York, but no information is given about where the source material is to be found or by whom the data were compiled. This criticism is applicable to passages scattered throughout the volume. Further, the statistics, in general, cover the period 1919 to 1941, despite the fact that more recent information was available at the time the book was published. My statements should not be construed as necessarily questioning the reliability of the statistics for the periods covered; rather, they point out a limitation in the utility of the book.

Certain terminology in the book can be questioned, both as to its accuracy and to its general acceptance by the medical profession. For example, on page 11 one finds: "It has been agreed upon generally to reserve the term *chronic alcoholism* for those alcoholics who manifest physical or mental impairment due to drinking. This distinction is necessary for the simple reason that not all chronic alcoholics are addicts who cannot resist their craving for alcohol and not all addicts show signs of physical and mental deterioration." Although there may be merit to such a differential concept of chronic alcoholism, the literature on the subject does not seem to have established such a limitation of usage. More pertinent is the use of the term *addiction* throughout the book. Alcoholism would seem more technically described as a habituation, and this concept seems more generally accepted in the profession.

Despite certain looseness of terminology, such as has been exemplified, the volume merits inclusion in the practitioner's reference library. The chapters on "Abnormal Personality Types Among Alcoholics," "The Addict and His Family," and "Paranoid Trends Toward the Wife," as well as Dr. Kant's treatment of the medical, psychotherapeutic and social aspects of the problem, are particularly valuable. The book effectively points out why treatment of the neurosis alone is insufficient, and it explains the importance of recognizing the force of habit which has been emotionally con-

ditioned. Accordingly, successful treatment must go beyond psychotherapy to a recognition of the factor of social pressure and the need to prevent isolation.

Although brief, the discussion of the relationship of the personality of the therapist to his success in treatment is given appropriate emphasis.

The glossary should make the book intelligible to such non-medical readers as may have use for such a treatment of alcoholism.—*Leo B. Sedlacek, M.D.*

THE HEPATIC CIRCULATION AND PORTAL HYPERTENSION, by *Charles G. Child, III, M.D.* (Philadelphia, W. B. Saunders Company, 1954. \$12.00).

The normal and abnormal circulatory dynamics of the liver are admirably and thoroughly presented in this new book. The complexities of circulation of venous blood, arterial blood and lymph are documented, beginning with fetal life, passing through normal adulthood and ending with diseased states and operations to correct them. The coverage is complete, the bibliography is extensive, and the style is of the utmost clarity.

In reading this book, one is struck with the fact that previous discussions of liver physiology have minimized the tremendously dynamic forces that are concerned in the circulation in the liver. We have heretofore been interested principally in the function of the parenchymal cell, the Kupfer cell and the biliary system. Now we are made to realize that the actual dynamics and anatomy of the circulation through the liver are of utmost importance in shock, in water balance and in circulation throughout the body in general.

This book belongs in all extensive medical libraries and in the private libraries of internists and surgeons who are interested in the liver. It will be an excellent reference book for years to come.—*Daniel A. Glomset, M.D.*

CEREBROVASCULAR DISEASE, by *James Peter Murphy, M.D.* (Chicago, The Year Book Publishers, 1954. \$12.00).

The author is a neurosurgeon with a background in experimental neurophysiology. His monograph summarizes the present knowledge in the basic sciences as applied to the circulation of the brain, and it treats in detail the clinical phases of cerebrovascular disease in patients. His purpose in presenting such a study at this time is related to the increasing evidence of cerebrovascular disease consequent to the lengthening life of the contemporary American.

Twenty-one chapters take the reader through all phases of the problem, beginning with a consideration of the embryology of the intracranial vessels, and extending through a detailed account of the anatomy of the intracranial vascular structure, their nerve supply and physiology. The remainder—and greater part—of the book is devoted to clinical problems, including the examination of the patient with an acute cerebrovascular insult, the differential diagnosis, general patient management, and special diagnostic and therapeutic techniques.

Certain minor faults are present in the work, though they do not detract from its worth as a whole. This reviewer deplores the continued use of the term *cerebrovascular accident* in describing a non-traumatic situation. The Hoffman sign is described as a pathologic

reflex analagous to the Babinski sign of the lower extremity, which it is not. In his exposition of the stellate-block technic, the author does not mention a simplified lateral approach that is safer than those he describes. Such criticism, however, does not impugn the validity of the main bulk of the volume.

The author's style, though tedious at times, is straightforward and unvarnished, and it carries authority. The bibliography is extensive, but unfortunately it is appended to each separate chapter, and the authors quoted do not appear in the index.

Most textbooks of neurology contain sections on cerebrovascular disease, but I doubt that any can duplicate the wealth of material here assembled. No aspect of the subject is neglected, as Percival Bailey points out in his Foreword, and I enthusiastically recommend the book to all physicians interested in improving their care of patients with stroke—and that includes most of us.—*John T. Bakody, M.D.*

SURGICAL UROLOGY, by *R. H. Flocks, M.D.*, and *David Culp, M.D.* (Chicago, The Year Book Publishers, 1954. \$9.75).

The authors present a beautifully illustrated operative handbook. It fills the need of genito-urinary surgeons for a concise source of reference material. The superb illustrations offer clear guidance in technical detail, and will enable the practicing urologist to retrace the steps of an operative procedure that he may have performed only infrequently.

The material is divided into ten major sections: Kidney, Ureter, Bladder, Prostate, Urethra, Penis, Scrotum, Testis, Epididymis and Vas Deferens, and Transurethral Surgery.

A brief review of the anatomy precedes each section. There is much of interest in each section, and the illustrations on the Johanson procedure for urethral stricture will prove of special interest to many urologists.

In the review copy there is some reduplication of pages in the section 210 through 220, but none of it detracts from the value or usefulness of the text.

It is a pleasure to sit and course through the illustrations, and I believe it is one of the most practical presentations of its subject.—*Edmund T. Burke, M.D.*

THE ATOM STORY, by *J. G. Feinberg, M.Sc.* (New York, Philosophical Library, Inc., 1953. \$4.75).

From this somewhat story-book account of nuclear fission, almost all who read it will gain considerable knowledge and understanding of the future atomic age. The book also contains sufficient technical material to hold the interest of those better versed in nuclear detail.

It gives a historical account of the atom from early Greek mythology to its present-day relationship to the human race in peace and war. Of great value is the appendix, for it (a) answers many questions regarding survival under atomic attack, (b) explains so-called atomic tools, and (c) contains a glossary of terms frequently met in current literature.

Almost anyone who will take time to read "The Atom Story" will find it entertaining as well as informative.—*Noble W. Irving, M.D.*

STATE DEPARTMENT OF HEALTH

Edmund G. Finney
COMMISSIONER

TYPHOID AND PARATYPHOID FEVER CASES AND CARRIERS

To date for 1954, 15 cases of typhoid and 3 cases of paratyphoid fever have been reported to the State Department of Health. These are cases with clinical diagnosis of typhoid fever confirmed by laboratory findings. The 15 cases have occurred in 13 families. One family has had three cases, two of which are probably secondary cases. This corresponds to 20 cases of typhoid and 3 cases of paratyphoid fever reported for the corresponding period in 1953. The incidence indicates that endemic typhoid is maintaining itself at approximately the same level in Iowa.

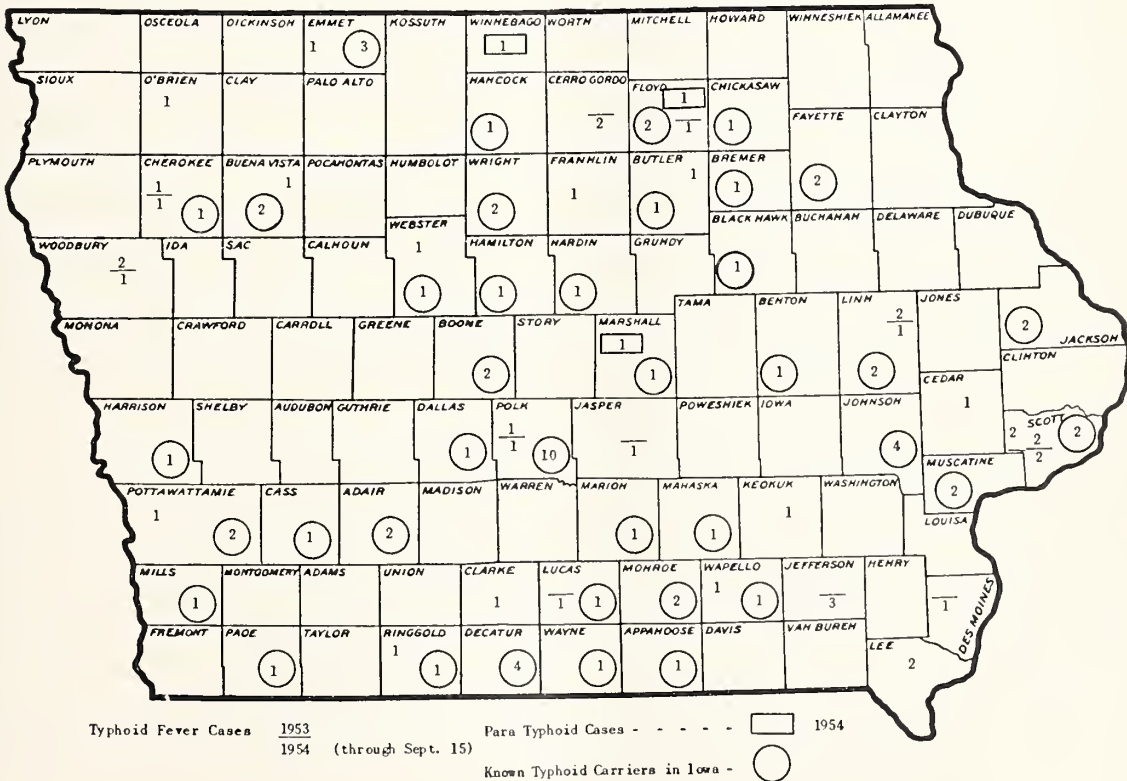
Because of the increased traveling and increased convivality of people, it becomes more and more difficult to find sources of the sporadic case. On a recent occasion a paratyphoid patient had traveled in 11 states and partaken of food and drink in

about 40 different restaurants. Another had recently returned from a vacation in Mexico.

Of the cases reported thus far in 1954, the carrier source for only one has actually been established. The family with three cases lives in an area of a city where typhoid was unusually prevalent until the '30's when mass vaccination was done. The time required to check on previous cases of 20 to 30 years ago in the area will require weeks.

Carrier surveillance, accompanied by education in personal hygiene and food handling and immunizations for other members of the family has been effective in preventing new cases from a known carrier source.

Known carriers have decreased from 131 five years ago, to 68 at the present time. Some were apparently cleared up through cholecystectomy, some moved to other states and some were removed by death. Three newly discovered carriers have been added to the list this year.



MOBILE HOME PARK LAW

The Mobile Home Park Law, which appears as Chapter 135D, Code of Iowa, 1954, was enacted by the 55th General Assembly, and became effective January 1, 1954. This law requires that parks in which two or more mobile homes are harbored must meet the standards set in rules and regulations of the State Department of Health and must obtain an annual license. In addition, the Law requires that no new parks shall be constructed until an application for a permit, along with plans of the proposed park, are submitted to the State Department of Health and a permit issued.

The law applies to persons, firms, corporations, municipalities, or political subdivisions of the state which operate mobile home parks. Exemptions to the law include parks operated temporarily by any individual, educational institution, or company on its own premises for the exclusive housing of its own labor or students; those operated in state parks; and those operated on grounds where the state fair, county fairs, or livestock expositions are being held.

The State Department of Health has prepared Rules and Regulations Governing Licensing of Mobile Home Parks, which include sections on licensing, permits for construction and reconstruction, toilet and washing facilities, water supply, sewage disposal, refuse disposal, and miscellaneous regulations. The Rules and Regulations were prepared in bulletin form, were distributed to all local boards of health and to all operators of mobile home parks. They are also available to all persons interested in establishing such parks.

According to the law, all applications for license and applications for permits to construct, reconstruct, or remodel mobile home parks located within the limits of a municipality shall be reviewed and approved by the Local Board of Health before being submitted to the State Department of Health. Under this provision, the Local Board of Health should inspect such parks and make sure that they comply with all local ordinances and other regulatory measures. This procedure is not required of parks located within the jurisdictions of County Boards of Health, although it is considered advisable.

One section of the law provides that the State Board of Health may delegate the duties of inspection and regulation of mobile home parks within its jurisdiction to Local Boards of Health where, in the opinion of the State Department of Health, such delegation will best effectuate the program. Such delegation has been made to the Local Boards of Health for the communities of Des Moines, Burlington, and Middletown, and for Polk County and Des Moines County.

Up to September 1, 1954, applications for licenses have been received from 307 mobile home parks, and after inspection, 178 of these parks were recommended for licensing. The remainder are mak-

ing efforts to qualify for licenses. The parks are located within 74 of the Iowa counties and provide housing for approximately 9,000 persons. Private water supplies are utilized in 25 per cent of these parks, and private waste disposal systems are used in 41 per cent.

POLIOMYELITIS

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1952	1	3	2	4	6	47	340	1260	1034	664	168	35	3564
1953	7	5	2	4	14	21	59	248	123	69	39	22	613
1954	1	9	4	7	5	26	223	326	449	72*			

* 1st week of October

GAMMA GLOBULIN DISTRIBUTION SUBSEQUENT TO OCTOBER 1

Contracts of the National Foundation for Infantile Paralysis to purchase gamma globulin from commercial firms expired as of October 1. The Office of Defense Mobilization has not taken any action in regard to existing supplies and has not changed the policy of distribution through health departments. In view of the problem, the Office of Defense Mobilization has agreed to correlate the distribution of supplies available from the National Foundation for Infantile Paralysis and the American Red Cross in accordance with existing policies until December 31, 1954.

The Office of Defense Mobilization has no control over supplies available through commercial channels. Undoubtedly, this supply will be relatively small, at least for the time being. Prior to control of gamma globulin by the Office of Defense Mobilization, it was available through the American Red Cross and was distributed by health departments for the prevention of measles and infectious hepatitis. Gamma globulin was also available through commercial channels at that time. Use from both sources was made without too much apparent conflict. Perhaps a similar arrangement can be made at this time.

POLIOMYELITIS VACCINES FOR 1955

While the above gamma globulin information has been received by all state and territorial health officers, no official information has been received to date concerning the use of poliomyelitis vaccine for 1955. In other words, one guess is still as good as any other as to the amounts and kinds of vaccines which will be available, whether their use will be supervised or regulated, and if so, what persons will be responsible for the supervision and who will be eligible to receive the vaccine or vaccines.

NURSE RECRUITMENT GOAL IS SET

The present recruitment goal for the United States has been set at 55,000 student nurses a year, it has been announced by Dr. L. A. Scheele, surgeon general of the U. S. Public Health Service.

Estimates based on the latest available figures from the 48 states and the District of Columbia show a total of 389,600 professional nurses in active practice. The number of hospital nurses, the largest single group, has increased by 15 per cent in the last four years to a total of 231,000. Private duty nurses, the next largest group, who are also at the bedside, number 74,000. The 35,200 nurses working in doctors' offices; 25,300 public health nurses; 14,000 industrial nurses; and the 8,200 nurse educators in schools of nursing make up the remainder of the total, along with 1,900 nurses in a variety of other fields.

But the ratio of all nursing personnel, including student nurses in general hospitals, has risen from 69 per 100 patients to 74 per 100 patients in the same four years, making it the highest in history. For that reason, and because rapidity of turnover continues to be an important factor in the situation, the demand for nurses continues unabated.

"The steady rise in the nurse supply of the nation is significant to the total health picture," Dr. Scheele pointed out, "because nurses play such a vital part in all phases of our national health."

DERMATOLOGY AND SYPHILOLOGY

A postgraduate session in dermatology and syphilology at University Hospitals, Iowa City, is planned for Friday, November 12, 1954. The session will consist of principles of examination and diagnosis of elementary lesions and patterns of skin disease, case demonstrations and discussions. Recent advances in dermatologic therapy will be stressed. The registration fee is \$10.00.

MORBIDITY REPORT

Disease	Aug. 1954	July 1954	Aug. 1953	Most cases reported from these counties
Diphtheria	1	1	1	Page
Scarlet Fever ..	16	15	8	Buena Vista, Des Moines, Scott
Typhoid Fever .	7	1	3	Des Moines, Floyd, Jasper, Linn and Lucas 1 each, Jefferson 2
Smallpox	0	0	0	.....
Measles	121	842	96	Buena Vista, Des Moines, Linn, Scott
Whooping Cough	29	49	22	Black Hawk, Dubuque, Guthrie, Scott
Brucellosis	27	30	43	Dubuque 4, Benton, Jackson, Osceola 2 each, others scattered 1 to a co.
Chickenpox	10	113	80	Des Moines, Mills, Scott
Meningococcus				
Meningitis ...	2	3	4	Polk, Pottawattamie
Mumps	106	236	111	Black Hawk, Des Moines, Linn, Mills, Scott
Poliomyelitis ..	326	223	249	Jasper, Linn, Polk, Scott 112 paralytic, 156 non-paralytic, 58 unspecified
Infectious				
Hepatitis	248	296	109	Allamakee, Calhoun, Polk, Webster
Rabies in				
Animals	27	19	10	Woodbury 5, Mitchell 3, Boone and Page 2 each; others 1 to a co.
Tuberculosis ...	51	60	71	For the state
Syphilis	118	139	160	For the state
Gonorrhea	61	89	58	For the state

Iowa Academy of General Practice

(Continued from Page 531)

complished. So belonging to the Academy places you on an equal plane with 18,000 other practicing physicians who have the same ideals, hopes, and objectives and are working together in a common aim, namely, to have our rightful place among our fellow men and to be the trusted confidant of our patients.

MEMBERSHIP CLASSIFICATION

Questions constantly arise regarding the various types of membership offered in the American Academy of General Practice. These various classifications, as used by the Iowa Academy, are as follows:

1. Active Member. All practicing physicians who meet requirements of the By-laws.

(Active Exempt) Those active members past the age of seventy and/or who have been in practice more than thirty years. Exemption from medical studies must be requested by member and granted by state chapter.

2. Associate Member. Interns or Residents engaged in approved training programs.

3. Inactive Member. Active members incapacitated or unable to engage in active practice and those in temporary military service.

4. Sustaining Member. Any member who has ceased the practice of medicine (one who has entered another field of endeavor) and desires to retain affiliation.

5. Honorary Member. A person of national or international distinction elected by the Congress of Delegates.

The Iowa Chapter may elect honorary members of its chapter, but this does not make the person so elected an honorary member of the American Academy of General Practice.

Active members and Sustaining members of the American Academy pay full annual dues; Associate members' dues constitute a subscription to *GP*; Inactive members pay no dues, but may subscribe to *GP* at the member rate. Honorary members pay no dues.

The membership rolls are always open. It is desired that every qualified general practitioner belong to the Academy. Application forms may be obtained from the secretary.

PEDIATRICS FOR GENERAL PHYSICIANS

The University of Minnesota will present a continuation course in pediatrics for general physicians next January 6-8, at the Center for Continuation Study, on the Minneapolis campus. The program will stress the recognition and management of urinary-tract problems in youngsters. Guest speaker will be Dr. Henry Barnett, associate professor of pediatrics, Cornell University Medical School.

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Publications Chairman*, Dexter, Iowa

President—MRS. LESTER R. HEGG, Rock Valley

President-Elect—MRS. CHARLES H. FLYNN, 709 W. 15th Street, Clarinda

Secretary—MRS. ROBERT P. MASON, 5818 Chamberlain Drive, Des Moines 12

Treasurer—MRS. HOWARD H. SMEAD, 3333 Grand Avenue, Des Moines 12

FALL EXECUTIVE BOARD MEETING

Members of the Executive Board of the State Auxiliary met at the Savery Hotel, Des Moines, for a Dutch treat dinner at 6:00 p.m., on September 27. Afterward, a roundtable discussion and a pre-Board conference were held.

The official Board meeting began at 10:00 the next morning, at the State Medical Society's office, 529-36th Street, Des Moines. Mrs. Lester R. Hegg, Rock Valley, State Auxiliary president, presided, and 27 members were present.

APPOINTMENTS

The president named Mrs. R. F. Nielson, Cedar Falls, and Mrs. F. D. Edington, Spencer, as members of the Nominating Committee, of which Mrs. Lonnie A. Coffin, Farmington, is chairman. Mrs. Howard W. Smith, Woodward, and Mrs. Noble Irving, Jr., Des Moines, are the other members.

She also named Mrs. A. E. Acher, Ft. Dodge, as Fifth District Councilor, to replace Mrs. R. M. Minkel, who has moved from the state. Mrs. W. C. Friday, Burlington, will take over the duties of the Eighth District Councilor, since Mrs. C. J. Lohmann, Burlington, has found it necessary to resign because of illness in her family.

NURSE LOAN FUND

Mrs. E. A. Larsen, Centerville, chairman of Nurse Recruitment and Loan Fund, reported that the Auxiliary has made commitments for loans totaling \$3,565.00 to seven student nurses in Iowa. Four of these are new loan girls. The Committee has got in touch with every school and every nursing school in the state, to secure the names of prospects for loans. It is absolutely essential, she said, that county auxiliary members and members-at-large send their contributions to this fund, if this fine project is to be developed to its greatest potential. Fifty cents per member is expected, and larger donations will, of course, be most welcome. The great size of the Loan Fund and the work entailed from the financial standpoint alone can be seen when one compares the total of the present loan commitments with the 1954-1955 budget of the Auxiliary, which is \$2,700.00.

TODAY'S HEALTH

Mrs. R. H. Moe, Groswood, TODAY'S HEALTH chair-

man, outlined her plans for increasing subscriptions to the magazine. If every doctor in the state not only subscribed for himself, but made a gift of a subscription to a dentist or other professional friend, it would be possible to boost Iowa's subscription rating considerably. If every Auxiliary member in the state were to give at least one subscription as a Christmas gift, our level would be greatly improved. Unfortunately, Iowa ranks low in the nation on TODAY'S HEALTH subscriptions. Since this is one of the first and oldest projects of the Auxiliary nationally as well as state-wise, and since it is a project in which all doctors' wives can participate with a minimum of effort and cost, it might be well for us to consider making a subscription or several subscriptions a personal as well as an Auxiliary obligation. TODAY'S HEALTH is the only authentic health magazine available for laymen and the only one published and advocated by the AMA. It is not available on newsstands. Subscription is the only way it can be circulated. Our state president and her doctor husband have been making a present of a year's subscription to TODAY'S HEALTH to each member of the graduating class in Rock Valley for some time.

Mrs. H. C. Merillat, Des Moines, chairman of Work for the Handicapped, stated that there will be three more sales this fall of articles made by handicapped people. These will be held at Waterloo, Dubuque and Sioux City. In 1953, a total of \$3,641.00 was raised by selling merchandise through the Auxiliary for the benefit of 150 handicapped persons. Each year, new details need to be worked out, but it is agreed that the sales are worthwhile not only for the beneficiaries, but from a public-relations standpoint both to the Iowa Crippled Children's Society and to the Auxiliary.

A.M.E.F.

Mrs. H. A. Spilman, Ottumwa, chairman of the American Medical Education Foundation Committee, reported a donation of \$292.00 from the Iowa Auxiliary the past year. This project, which is being promoted by the AMA, is intended to strengthen medical schools in the United States and to discourage federal financial aid. Gifts to the AMEF are tax deductible. Money may be sent

to the state treasurer, Mrs. Howard H. Smead, 3333 Grand Avenue, Des Moines 12, and the county Auxiliary will receive credit. Special memorial cards are available from Mrs. Spilman for individuals or Auxiliaries that prefer to make a gift to the Foundation in memory of the deceased.

Mrs. Dean King, Spencer, first vice-president, reported district meetings in Page and Appanoose Counties. The Third District scheduled a meeting at Spencer in October.

Mrs. B. F. Kilgore, Des Moines, member of the Yearbook Committee, announced that the yearbooks would be ready soon and would be mailed to all members.

ISMS LEGISLATIVE COMMITTEE

Following an excellent luncheon, which was served in the conference room at the State Society's headquarters, Dr. F. C. Coleman, chairman of the Legislative Committee of the Iowa State Medical Society, discussed legislation of interest to the profession. The Hill-Burton Hospital Construction Act has been expanded, he said. Of the \$21,000,000 allotted to the separate states, Iowa will receive \$303,000. Of that sum, \$100,000 will be used to create diagnostic treatment centers, \$100,000 will be used for chronic disease hospitals, and \$52,000 will be used for nursing homes.

Other national legislation which was adopted during the last session of Congress included an expansion of facilities for vocational rehabilitation. The present Doctor-Draft Law will expire in 1955. It is expected that on graduation from medical school, all young doctors will be required to go into service for a stipulated time.

Legislation which has not been finally disposed of included the President's reinsurance bill. The feeling is that President Eisenhower and Mrs. Hobby will continue to press for passage of such a bill. The Mortgage Reinsurance Bill was not passed. It would have provided one billion dollars of federal financing for closed panel practice. The bill had to do with corporate medical practice similar to the Kaiser Plan.

On a state level, the profession needs to keep informed about the desire of chiropractors to expand their field of practice and about the issue of a common licensing board for M.D.'s, osteopaths and chiropractors.

Dr. Coleman stressed that everyone should register and that everyone should vote. Doctors and their wives would do well, he said, to visit with candidates for office in their vicinities and to learn their attitudes on issues which affect the profession. He concluded his informative talk with this thought: "Five minutes with a candidate before election are worth five hours spent with him afterwards."

Mr. Don Taylor, the new executive secretary of the Iowa State Medical Society, explained the recent reorganization of the staff at the head-

quarters. Because of illness, Miss Mary McCord resigned the heavy responsibilities of the executive secretaryship and is now director of scientific education. Mrs. Dorothy Dolk is assistant to Mr. Taylor. The Auxiliary is most fortunate to have Mrs. Hazel Lammey as its secretary. Mr. Taylor outlined briefly the plan by which the Iowa State Medical Society works through 35 committees to handle the contemporary problems and business of organized Medicine in Iowa.

Following the talks, Mrs. W. A. Seidler, Jamaica, chairman of Revisions, read from the new Constitution and By-Laws on which her Committee has been working for the past two years. Only the radical changes recommended by the Revisions Committee were read, cancelled or revised and passed by the Board in order that the Committee may have both documents in readiness for reading at the Annual Meeting.

MRS. KEITH M. CHAPLER
Publications Chairman

DISTRICT MEETINGS

ELEVENTH DISTRICT

The Woman's Auxiliary to the Page County Medical Society were hostesses to the doctors' wives of the Eleventh District on Wednesday, September 15, 1954. Registration and coffee hour were in charge of a committee of which Mrs. Kenneth Gee was chairman.

Seventeen women heard Franc Kriwanek, local artist, speak on art. Mr. Kriwanek discussed various schools of painting and told of his own work. He displayed some of his stoneware, telling how he tried to depict our modern life through that ancient medium. He told of his classes in art appreciation and in actual artistic effort.

He stressed the importance of America's finding its place culturally so that it can become, in a complete sense, a world leader. Original paintings on the walls, he said, express the personalities of those living in a home. Often the original piece is less expensive than a print of an already famous work, and, he added, "You can buy an original painting for a small price, and then if the man who painted it becomes famous, you are in possession of a financially valuable work of art."

Following his talk, Mr. Kriwanek's watercolors, as well as his stoneware, were on display.

Thirty women attended the banquet held at 7:00 p.m. in the Elks Club basement. The doctors and their wives who attended the afternoon session or were present for the dinner came from Clarinda, Sidney, Red Oak, Atlantic, Villisca and Council Bluffs, Iowa, from Omaha and Nebraska City, Nebraska, and from Tarkio and Rockport, Missouri.

MRS. CHARLES M. FLYNN
President-elect

NINTH DISTRICT

Twenty-one doctors' wives, with their husbands, attended the Ninth District Medical Meeting at the Centerville Country Club on September 15. Preceding the banquet, Auxiliary members held a meeting with Co-councilors Mrs. H. A. Spilman and Mrs. E. B. Howell, both of Ottumwa, in charge. Plans were made to include all counties in the district. Dr. G. V. Caughlan, Council Bluffs, president of the Iowa State Medical Society, was the featured speaker at the banquet, and topics under discussion related to State Society business.

STATE PRESIDENTS' CONFERENCE

Mrs. Lester R. Hegg, Rock Valley, president of the Iowa Auxiliary, will have a part in the public relations panel discussion at the Conference of Presidents and Presidents-Elect, in Chicago, November 16-18. Her topic will be Geriatrics, a subject of particular interest to Iowans since Iowa ranks second in the nation in its population of older people. Mrs. Hegg will show an exhibit of the work of Iowa Auxiliary members, too.

YOU AND YOUR CONGRESSMAN

Who does lobbying for the American Medical Association? The answer is simple: "You do!" You are the citizens who can help make legislation easier by helping your Congressman to make up his mind on public issues.

Lobbies are sometimes called the third house of Congress because lobbying is a necessary legislative process in a democratic society. It's a right given by the Constitution itself in the first amendment which guarantees a citizen the right to petition his Congressman for legislation.

Of course, there are professional "registered" lobbyists who hang their hats in many of the most exclusive Washington clubs, but the most effective lobby work is not done along the banks of the Potomac. The lobbying which carries the most weight is done along the banks of the Wabash, the shores of the Hudson, or the beaches of the Pacific—in other words, by American citizens back home in the 48 states who are interested in good American government.

It's a pleasure to be able to tell you that the lobbying activities conducted by the AMA and its friends not only are successful, but they are operated on the highest level.

Let's try to follow the path of legislation, with emphasis on the work the physician's wife can do to bring about better laws and government.

When a bill is born, the AMA's Washington office takes an interest the moment the "birth certificate" is recorded in the daily CONGRESSIONAL RECORD. An AMA staff attorney carefully checks all bills and resolutions as they are introduced

for interest to the medical profession. We inquire of the Congressman or his staff as to why it was introduced, and whether it was introduced on behalf of the Congressman or at the request of a constituent, another individual or an organization. This type of information often clarifies our analysis of the bill.

The bill is reviewed and reported to the more than 6,000 persons who receive our weekly AMA WASHINGTON LETTER. Then AMA's Legislative Committee considers the bill and makes recommendations to our Board of Trustees. The Board of Trustees takes a position varying from "active support" to "no action" to "active opposition."

In cases of emergencies when quick decisions are required, long distance telephone conferences are arranged to bring together the elected representatives of physicians. One recent conference saw Dr. Dwight Murray, of Napa, California, chairman of the Board of Trustees, and trustees in Virginia, Texas, and New Jersey on a "party-line" call.

As soon as AMA's official position is taken on a pending bill, letters and telegrams are sent to state and county medical societies.

Now the most elemental and essential—the most American—type of lobbying begins. The physician back home begins writing or visiting his Congressman. He tells him how organized medicine feels about a measure and why it has made such a diagnosis.

It is at this point in the legislative process from bill to law that you can do your part on specific legislation by contacting your Congressman and Senator. It is at this point that your background of legislative procedure and affairs will be helpful. If you have made it a point previously to meet your Congressman and he knows you or your organization, your task of helping to explain to him the viewpoint of the AMA will be easier.

Congressmen have told me that they give more thought to personal letters written in the writer's own words or to personal visits. Form letters and form postal cards are at the bottom of the "influence meter." These media give the impression of a planned campaign rather than an individual voter's sincere beliefs.

A telephone call is all right, if necessary, but a personal letter creates a better impression.

You may be asking, "Well, how can I acquire enough of a legislative background to talk intelligently with my Congressman?"

It is not too difficult. If you are on the legislative committee of your state or local Auxiliary, or if you are an officer of either, you probably receive all the information you need. Most valuable, I think, is our AMA WASHINGTON LETTER and SPECIAL REPORTS. These keep you up to date on new legislation and give you the necessary background on all legislation. I would guess that if you keep yourself familiar with what is in these publications you will know as much about medical legis-

lation as 90 per cent of the lawmakers in Congress.

For reasons of cost the Washington Office attempts to restrict its mailing list to Auxiliary members who are actively engaged in legislative activities. But if you don't receive our publications, you still can acquire a good background on national legislation by following the Washington News pages in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION and special legislative articles in that publication.

You and your husband might make a personal visit to your Congressman when he returns home from Washington or between sessions.

The best time to get acquainted with your Washington representative is when he is at home listening to the people.

It might be advisable to learn the identity of his family physician so that he can talk over the medical profession's problems with the Congressman.

Another fine method of getting to know your Congressman is to invite him to your meetings for a discussion of your mutual problems. When he is acquainted with your group and knows that you take an interest in him and in his work, he usually will do everything he can to work with you.

If he accepts your invitation and attends your meeting, be sure to write and thank him for taking time out to meet with you. Complimentary letters thanking him for his interest pay dividends over the long run.

If your Congressman is cooperative and interested in medicine's problems, please do not make the mistake of taking him for granted. That is one of the most frequent complaints I hear from many of our good friends on Capitol Hill. You need his support on legislation—and he needs your support to stay in office.

We in the AMA Washington office try to make it our job to be an information source for members of Congress. Let me cite an example. Let us say that a bill is introduced to spend a large amount of money on multiple sclerosis research. The Congressman who is not a physician or versed in human physical ailments will have to know something about multiple sclerosis if he wants to perform an intelligent job. He does not want to write home for the information; so, he may telephone the AMA Washington office for it. We might tell him that we already have investigated this question and that the Surgeon General of the Public Health Service has advised us that the appropriation is too restrictive, or that other research problems present a greater need.

The AMA's Washington office operates on an impartial, non-partisan basis. We offer the same information to Republican or Democrat.

If our office tried to pressure a legislator into voting for or against certain measures, he soon would quit calling us for information. He knows

that the information we give him will permit him to vote intelligently.

Our office in Washington is a fact-gathering and fact-disseminating agency. We gather up the information and pass it on to you and your husbands in our regular and special publications. It is you people, scattered through every state, who must maintain personal contact with your lawmakers in Washington. They may occasionally listen to us in Washington, but they will always listen to you if you take the trouble to maintain the proper relationships with them.

You are the necessary and the essential lobbyists. It is you who in the past have preserved the freedom of the medical profession. If it is to be kept free in the future, you must continue in your patriotic work.

You are the constituents that your Congressman depends upon. You are the necessary and essential lobbyists!

FRANK E. WILSON, M.D.

Director, AMA, Washington Office

SPEAKERS' BUREAU SCHEDULES

RADIO

WOI—Ames, Iowa

Thursday at 11:15 a.m.

"MUSIC WITH YOUR MEALS"

November 4 Food Fads and Fallacies
November 11 Food Poisoning

"PHYSICAL MEDICINE"

November 18 Infantile Paralysis
November 25 Massage

WSUI—Iowa City, Iowa

Tuesday at 11:45 a.m.

"TRAIN UP A CHILD"

November 2 The Aggressive Child
November 9 The Over-submissive Child
November 16 Persistent Bad Habits
November 23 Your Child in School
November 30 Children as Members
of the Family

TELEVISION

WOI-TV—Ames, Iowa

Friday at 9:30 p.m.

November 5 Plastic Surgery
November 12 A Life to Save (Film
from the AMA)
November 19 Speech Therapy
November 26 Pregnancy

COUNTY SOCIETIES

MEETINGS

Johnson

At the October 6 meeting of the Johnson County Medical Society, Professor James Van Allen, of the Physics Department at SUI, spoke on "Rocket Experiments in the Arctic."

Lee

Thirty-six attended the Lee County Medical Society meeting held at the Anthea Hotel, in Ft. Madison, on September 15. Speakers included Dr. J. L. Ehrenhaft, chairman of the Division of Thoracic Surgery at SUI, and Dr. J. A. Gius, of the University's Surgery Department.

Page

Forty doctors from the southwest Iowa area were guests of the Page County Medical Society at the Elks Club in Shenandoah on September 15. Featured speakers were Drs. C. A. McAfee, Michael Karl and Eugene Bricker, all of Washington University School of Medicine, St. Louis.

Polk

At the November 17 dinner meeting of the Polk County Medical Society, to be held at the Savery Hotel, in Des Moines, Dean Norman B. Nelson, of SUI, will discuss "Polk County and the College of Medicine at the State University of Iowa."

Scott

On October 5, Dr. J. Arnold Borgen, professor of medicine and head of the Department of Gastroenterology of the Mayo Foundation and University of Minnesota Graduate School, Rochester, presented a paper on "Present Day Management of Ulcerative Colitis" at the regular meeting of the Scott County Medical Society. The Scott County Medical Society is again co-sponsoring a series of physicians' forums, in conjunction with Davenport Newspapers, Inc. This year there are to be 4 forums, the first of which, on the topic "For Women Only," was held on October 14. There will be one given by the Dental Society,

one on psychiatry and one on rheumatic heart disease.

Wapello

At the October 5 meeting of the Wapello County Medical Society, Dr. M. S. Mazel, of Chicago, spoke on the subject "Surgical Treatment of Coronary Heart Disease." The speaker for the November 5 meeting is to be Dr. James E. O'Dell, assistant professor of pediatrics at SUI, and his topic is to be "Congenital Heart Disease."

Woodbury

Dr. John W. Kirkland, of the Mayo Clinic, Rochester, Minnesota, was guest speaker at the October 28 meeting of the Woodbury County Medical Society.

DEATHS

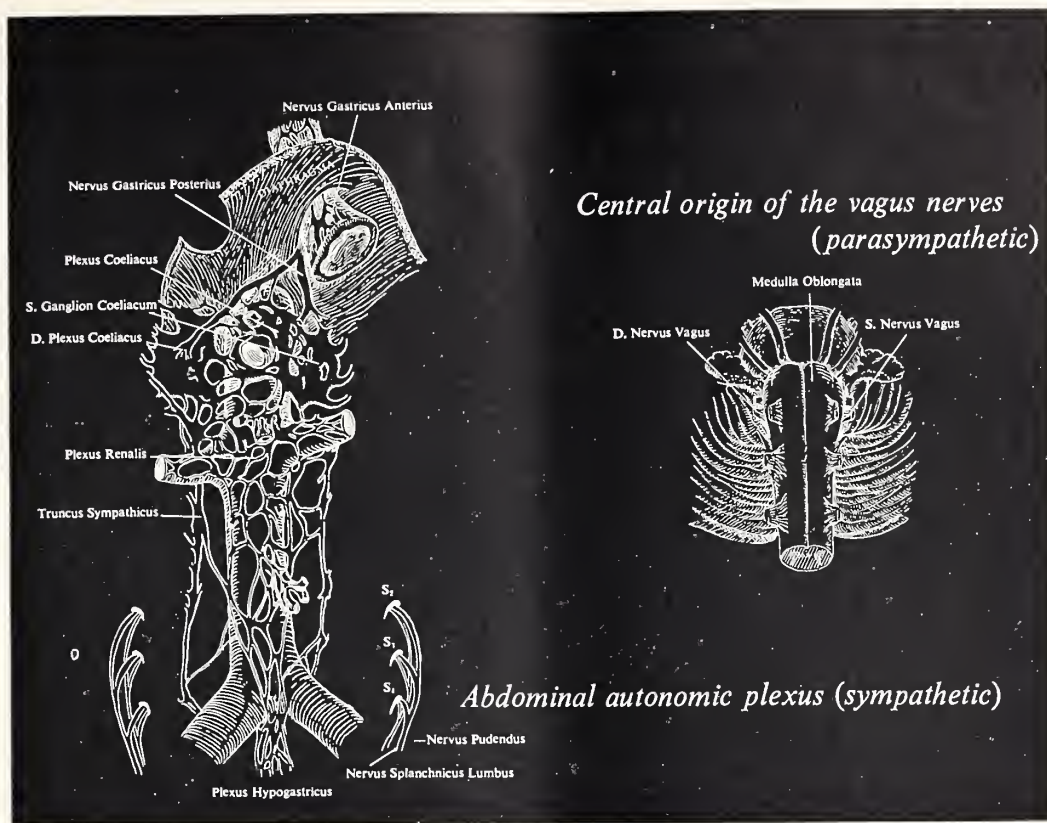
Dr. William Doornink, 56, of Orange City, died at Methodist Hospital, Sioux City, on September 15, of a heart ailment from which he had suffered for several years.

Dr. Louis Hiran Jones, 84, of Wall Lake, a Life Member of the Iowa State Medical Society, died of heart disease on September 16 at St. Anthony Hospital, in Carroll, where he had been a patient for about a week.

Dr. George A. Field, 81, a retired Des Moines general practitioner and a Life Member of the Iowa State Medical Society, died on September 18 at Scarsdale, New York, where he and his wife were living with one of their daughters. He had been ill only a short time.

Dr. John C. Shrader, 56, a specialist in internal medicine at Fort Dodge, died in his sleep at his home, on September 10, apparently from a heart attack. He had practiced there since 1927.

Plan to attend the Iowa State Medical Society's Annual Meeting, April 24-27, 1955, in Des Moines.



Control of Gastric Motility and Spasticity in Peptic Ulcer with Banthine®

"The need¹ for suppressing gastric motility and spastic states is . . . fundamental in peptic ulcer therapy. Since the cholinergic nerves are motor and secretory to the stomach and motor to the intestines, agents capable of blocking cholinergic nerve stimulation are frequently used to lessen motor activity and hypermotility."

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It has been shown¹ to diminish gastric motility and secretion significantly as well as intestinal and colonic motility.

The usual schedule of administration in peptic ulcer is 50 to 100 mg. every six

hours, day and night, with subsequent adjustment to the patient's needs and tolerance. After the ulcer is healed, maintenance therapy, approximately half of the therapeutic dosage, should be continued for reasonable assurance of nonrecurrence.

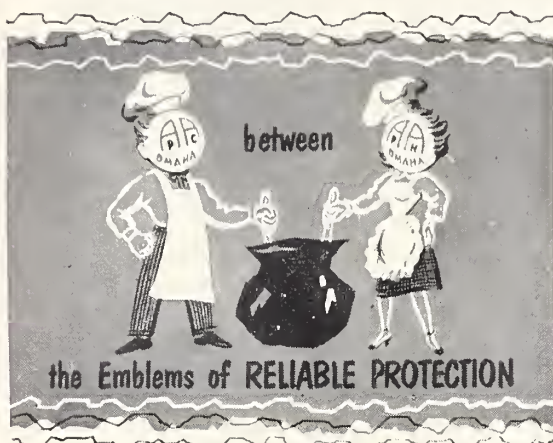
Banthine® (brand of methantheline bromide) is supplied in: Banthine ampuls, 50 mg.—Banthine tablets, 50 mg.

It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. Searle Research in the Service of Medicine.

1. Zupko, A. G.: Pharmacology and the General Practitioner, GP 7:55 (March) 1953.

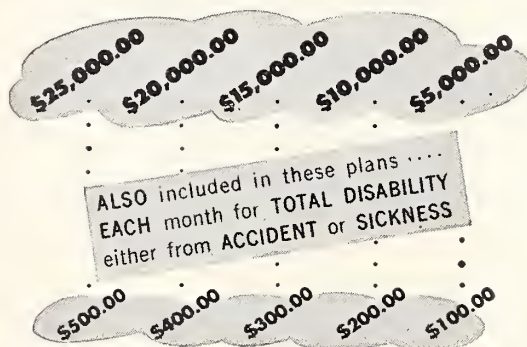
2. McHardy, G. G., and Others: Clinical Evaluation of Methantheline (Banthine) Bromide in Gastroenterology, J.A.M.A. 147:1620 (Dec. 22) 1951.

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The Month in Washington

Washington, D. C.—Although the elections back home are more stimulating than Washington doings these fall weeks, some of the quiet planning going on at the Pentagon should be of more than passing interest to physicians, young and old. The objectives are familiar: First, to insure a steady supply of physicians for the services; second, to improve the medical care program for military dependents. Primarily responsible for working things out are Dr. Frank Berry, Assistant Secretary of Defense for medical affairs, and the officers assisting him.

To insure that the services will get the physicians they need after the scheduled expiration of the Doctor Draft Act next July 1—without disrupting residency training—a plan bearing the formidable name of the Armed Forces Reserve Medical Officer Commissioning and Residency Consideration Program has been put into effect. It applies only to interns who have had no prior military service, and who therefore have a two-year obligation for service under the regular draft.

The plan's first deadline was October 10. By that time these young physicians were to have sent in to the Defense Department a form with the following information: (1) Their first, second, and third choices among the services, (2) whether they wanted additional deferment for residencies, and if so, what hospitals they prefer, and (3) the specialties they wish training in. Any in this group who do not apply for reserve commissions will be subject to the regular draft, will not be considered for residency deferments, and will not have a choice of services.

There is another problem involved. It is estimated that about half of the interns will want residency deferments. However, not more than a quarter can be deferred if the Army, Navy, and Air Force are to get their quotas of physicians. This difficulty is being resolved by a lottery. Those winning deferments will stay in the reserves and will be called up for duty as their specialties are needed after the completion of their residencies. Those losing out will be called as needed, at the end of their internships. The 50 per cent not asking for deferments will be allowed a choice of the month to be called up, a privilege not accorded the others.

On the dependent medical care program, Dr. Berry's annual report discloses that the Department is all set to put the expanded plan into operation, should Congress enact it. An implementing directive has been drawn up, a tentative fee schedule modeled on the VA "Guide for Medical Services" has been prepared, and a uniform "Military Dependent Identification Card" has



a good "mixer"
for your cough prescriptions

especially valuable when allergic factor
is suspected or present

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BLOOD DIAGNOSTIC REAGENTS

- 30-102—Blood Grouping Serum (Set Anti-A and Anti-B),
2 cc. of each.....Set \$2.00
30-105—Blood Grouping Serum (Set Anti-A and Anti-B),
5 cc. of each.....Set 4.50
35-605—Anti-A, B (Group O) Blood Grouping Serum,
5 cc.Each 2.50
32-102—Anti-Rho. (Anti-D) Typing Serum, (Slide or Rapid
Tube Test), 2 cc.....Each 3.25
32-105—Anti-Rho. (Anti-D) Typing Serum, (Slide or Rapid
Tube Test), 5 cc.....Each 7.50

SOLUTIONS IN VIALS

- 50-100—Physiological Salt Solution,
100 cc.Case of 100 35.00
51-100—Distilled Water (Water for Injection U.S.P.),
100 cc.Case of 100 35.00
55-050—Dextrose Injection 50%, 50 cc.....Case of 100 30.00

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In certain cases work given
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been developed and placed in limited use by the Navy and Air Force.

A dependent care bill was introduced last session, but not pressed by Defense Department. It provides a uniform program for the three services, with dependents defined and the extent of care limited. It also would have the military medical departments take care of all the dependents they could handle, with only the remainder going to private physicians and hospitals. The American Medical Association believes that this arrangement should be reversed, with emphasis put on private, non-government care for dependents.

The Defense Department is interested in other devices to keep up the quality as well as the number of its physicians. One of these is a scholarship program, which would require one year of military service for each scholarship year. Because regular draft time could be served out this way, any scholarship contract would call for a minimum of three years' active duty. The Department has high hopes that this program will be authorized by the next Congress. It also is hopeful that, once in operation, the scholarship contracts would result in more young physicians' joining the regular Army.

Meanwhile the Hoover Commission on Organization of the Executive Branch and the Kestnbaum Commission on Intergovernmental Relations continue with their studies and report-writing, efforts that now are definitely unspectacular but that ultimately could mean important changes in the government's medical programs.

The Hoover Medical Task Force is nearing the end of its long review of all federal medical operations. Its recommendations will be submitted to the full commission for consideration in the Commission's report to the President, due at the White House next May.

The Kestnbaum Commission's work of greatest medical interest is the study of health grants-in-aid, on which a special committee has just completed its report. The full Commission is scheduled to report back to Congress by next March.

OBSTETRICIANS' SHORT COURSE

The University of Minnesota will present a continuation course in Obstetrics for Specialists at the Center for Continuation Study from December 2 to 4, 1954. The guest faculty will include Dr. Curtis J. Lund, Professor and Head, Department of Obstetrics and Gynecology, University of Rochester Medical School; and Dr. Ralph A. Reis, Professor, Department of Obstetrics and Gynecology, Northwestern University Medical School, Chicago. The course will be presented under the general direction of Dr. John L. McKelvey, Professor and Head, Department of Obstetrics and Gynecology, University of Minnesota Medical School.



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Squibb Streptoduocin
Streptomycin and dihydrostreptomycin in equal parts

Distrycin has an important advantage over streptomycin. It has the same therapeutic effect but ototoxicity is greatly delayed. Since the patient is given only half as much of each form of streptomycin as he would have on a comparable regimen of either one prescribed separately, the danger of vestibular damage (from streptomycin) or cochlear damage (from dihydrostreptomycin) is significantly lessened.

Signs of vestibular damage appear in cats treated with Distrycin as much as 100 per cent later than in animals given the same amount of streptomycin.

On dosage of 1 Gm. per day for 120 days, ototoxicity was as follows*:						
Cat treated with streptomycin shows no nystagmus after whirling.			Vestibular damage % of patients			
			Mild	Moderate	Total	
		Streptomycin	12	6	18	
		Dihydrostreptomycin	6	0	6	
		Distrycin	0	0	0	
Cat given the same amount of Distrycin has normal reflex.			Cochlear damage % of patients			
			Mild	Moderate	Total	
		Streptomycin	0	0	0	
		Dihydrostreptomycin	12	3	15	
			Distrycin	0	0	0

*Heck, W.E.; Lynch, W.J., and Graves, H.L.: *Acta oto-laryng.* 43:416, 1953.

Distrycin dosage is the same as for streptomycin. In tuberculosis the routine dose is 1 Gm. twice weekly, in conjunction with daily para-aminosalicylic acid or Nydrazid (isoniazid). In the more serious forms of tuberculosis, Distrycin may be given daily, at least until the infection has been brought under control.

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1 and 5 Gm. vials,
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PERSONALS

Early in September, **Dr. Ernest D. Erickson** opened an office in the Badgerow Building, Sioux City, for the practice of internal medicine. He is a 1948 graduate of the College of Medicine at SUI, he completed a three year residency at University Hospitals in 1952, and he has been in military service since then.

Dr. F. T. Hach is engaging in general practice with **Dr. D. H. Nord** in Cambridge and Ankeny. Dr. Hach is a 1948 graduate of the medical school at Friedrich Alexander University, in Erlangen, Germany; he served 33 months as a civilian employed physician with the U. S. Army in Germany; he served an internship at Iowa Lutheran Hospital, in Des Moines; and he has been staff physician at the Iowa State College Hospital, in Ames.

Drs. Paul C. Cunnick and **Dorothy Gildea**, husband and wife, opened offices for the practice of surgery and pediatrics, respectively, in Davenport on October 1. Both are graduates of the College of Medicine at SUI, and both served residencies at hospitals in Baltimore. Dr. Cunnick was recently separated from the Navy, after serving in Japan and Korea.

After about 11 months' practice in Ames, **Dr. C. R. Scholl** has moved to Vinton, where he will be associated in general practice with **Dr. G. A. Fry**.

On October 15, **Dr. Anthony Sainz**, who has been senior staff physician and clinical director of the State Mental Health Institute at Cherokee, became senior staff physician engaged in advanced psychiatric investigation at the Veterans Administration Hospital in Iowa City. **Dr. Fanny T. Ginsberg**, the Institute's senior psychiatric physician, will succeed him, holding the title of Acting Clinical Director.

Dr. J. S. Devine, of Whittemore, left for San Diego, California, on October 18, to enter service with the Navy.

Dr. G. B. Hogenson has terminated his practice at Eagle Grove to serve at the Navy center in Omaha, Nebraska.

At the annual meeting of the Iowa Division of the American Cancer Society, held in Des Moines on October 9, **Dr. N. B. Nelson**, dean of the College of Medicine at SUI, was moderator of a panel discussion on "Answers to Cancer." Other panel members were **Dr. H. Dabney Kerr**, head of the Department of Radiology; **Dr. Willis Fowler**, professor of internal medicine; **Dr. H. B. Elkins**, professor of radiology; and **Dr. Robert C. Hickey**, professor of surgery. Dr. Kerr was awarded the Society's bronze medal for his outstanding contribution to cancer control in Iowa this past year.

Dr. John Sear, who has practiced at Alden since July, 1953, reported to Brooke Army Medical Center, Ft. Sam Houston, San Antonio, Texas, in October for reinduction into the Army. To replace him, **Dr. G. A. Edvenson**, of Iowa Falls, will maintain office hours at Dr. Sear's office.

On October 17, **Dr. Paul G. Meyer**, of Manchester, a captain in the U. S. Army Reserve, reported to Ft. Sam Houston, Texas, for an additional two years of military service. **Dr. William Mehrl**, of Dubuque, who has been assisting Dr. Meyer since he completed his internship at Detroit, Michigan, last July, will carry on the practice.

Dr. Arthur B. Cloud, of Guthrie Center, reported for service with the Army Medical Corps in October.

Dr. Ralph Duddles, a 1952 graduate of the medical school at the University of Minnesota who did his internship in Oakland, California, has joined **Dr. Robert Jongewaard** in general practice at Scranton.

Dr. Glen Knosp, who came to the Perry Clinic only last July, has left there to establish a practice in Elmwood, Nebraska.

On October 20, **Dr. R. M. Turner**, a captain in the U. S. Army Medical Corps Reserve, reported for military service at Ft. Sam Houston, Texas. Dr. Turner has practiced at Armstrong since August, 1950.

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Dr. A. D. Smith, who has practiced at Indianapolis for the past two and a half years, has associated himself with Drs. J. P. Clark and G. B. Johnston, at Estherville.

Three Des Moines surgeons, Drs. John Bakody, Henry G. Decker and Walter D. Abbott, read scientific papers at a semiannual meeting of the Iowa Neurosurgery Society, held at the Des Moines Club on September 17. Twelve men attended, including three from Omaha, Nebraska. The gathering was the third that the group has held.

Dr. Richard J. Peterson, a recent graduate of the College of Medicine at SUI, has joined Dr. C. A. Nicoll in general practice at Panora. He served his internship at Broadlawns Polk County Hospital, in Des Moines.

Dr. Gordon Neligh has left the Cogley Clinic to enter into the practice of surgery with his wife, Dr. Rosalie B. Neligh, in Council Bluffs. The latter, a consulting specialist in blood diseases, has been medical director of the Woodmen's Circle Insurance Company, in Omaha, and a member of the faculty of the Creighton University Medical School.

Dr. Winston B. Ditto, a 1953 graduate of the College of Medicine at SUI, has begun practicing with Dr. H. N. McMurray, in the Medical Arts Building in Burlington.

Dr. F. William Saul has joined the staff of the Park Hospital Clinic, in Mason City, as head of the Department of Radiology. He is a graduate of the Temple University medical school, he served both an internship and a residency in the hospital there, afterwards being for a year the executive assistant to the chief of the Department of Radiology at Temple, and from 1950 to 1954 he was chief of x-ray departments at two hospitals and a clinic in Greenville and Grove City, Pennsylvania.

At Fort Madison, Dr. Harry B. Helling, a 1953 graduate of the medical school at St. Louis University, has entered into an association with Drs. R. L. Feightner and Harold T. Werner.

At the November 3 session of the Webster County Postgraduate Course, at the Hotel Warden in Fort Dodge, Dr. Donald R. Nichols, of Rochester, Minnesota, will speak on "The Treatment of

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Pneumonia." At the November 17 meeting, Dr. Robert M. Wray, of Cedar Rapids, will speak on "Fractures in Children."

CONFERENCE ON PHYSICAL MEDICINE

On Saturday, November 6, the Central States Society of Industrial Medicine and Surgery is to conduct an institute on physical medicine and rehabilitation at St. Francis Hospital, in Peoria, Illinois.

Participants in the program will include Dr. H. W. Kendall, professor of physical medicine and rehabilitation, University of Illinois; Dr. J. N. Schaeffer, associate medical director of the Institute of Physical Medicine and Rehabilitation, Peoria; and Mr. J. M. Mason, personnel consultant and head of the mental health section of the Caterpillar Tractor Company, Peoria. Attendance at the meeting is limited to doctors of medicine.

FILMS ON BURN THERAPY AVAILABLE

"The Open Method of Burn Therapy" is the latest of two teaching films on the subject of burns that are available on loan to professional groups from Paul F. MacLeod, M.D., medical director, Eaton Laboratories, Norwich, N. Y. It was prepared by John C. Weeter, M.D., instructor in plastic surgery, University of Louisville School of Medicine, and illustrates the technique of open treatment, including the progress of one patient who suffered burns over 62 per cent of his body.

The other film is "Skin Grafting of Extensive Burns," prepared by Harry R. Grau, M.D., Cleveland, O., under the supervision of David W. Robinson, M.D., University of Kansas Medical Center. Both are 16 mm. films in sound and color. The running time of each is 20 minutes.

TECHNOLOGISTS' SHORT COURSE

The University of Kansas School of Medicine announces its Sixth Annual Postgraduate Course in Medical Technology, January 10, 11 and 12, 1955, to be presented at the K.U. Medical Center in Kansas City, Kansas.

The course will deal with subjects in hematology, bacteriology, mycology, serology, chemistry and miscellaneous laboratory procedures. In addition to lectures, the program will be highlighted by demonstrations, a discussion of the selection and care of laboratory glassware, films on "Phase Microscopy" and "The Normal Kidney," and a symposium as the closing feature of each day's program.

The course is open to all serving in medical laboratories upon payment of the \$12 enrollment fee. For program announcements, write: Extension Program in Medicine, University of Kansas Medical Center, Kansas City 12, Kansas.

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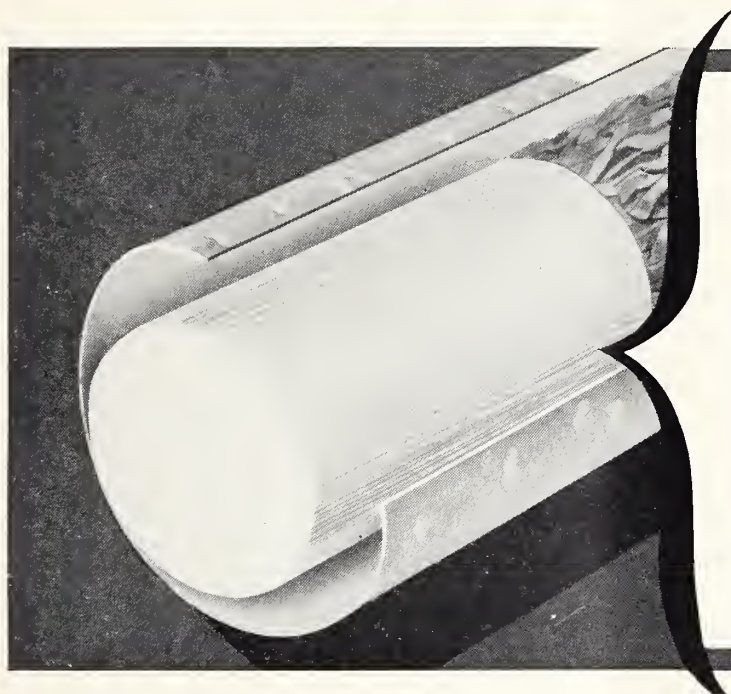
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FRACTURES

Fractures will be the subject of a continuation course to be presented by the University of Minnesota next November 22 to 24 at the Center for Continuation Study. Intended primarily for physicians engaged in general practice, the program will stress the practical management of the types of fractures most commonly met. Registrants will be invited to bring their own films to a "consultation session." The program will be presented under the direction of Dr. Wallace H. Cole, Professor, Department of Surgery, and Director, Division of Orthopedic Surgery.

DIET IN HEART DISEASE

"The Third Interim Scientific Meeting of the American College of Cardiology, to be held at the Hotel Algiers, Miami Beach, Florida, November 11-13, 1954, is to be concentrated on the topic of diet. Formal papers are to be delivered by Kaare Rodahl, M.D., Director of Research, Arctic Aeromedical Laboratory, Seattle; John W. Gofman, M.D., Division of Medical Physics, University of California, Berkeley; Wm. A. Jeffers, M.D., University of Pennsylvania, Philadelphia; E. Sterling Nichol, M.D., Director, Miami Heart Institute, Miami Beach; and H. Milton Rogers, M.D., St. Petersburg, Florida.

Three panel discussions, dealing with diet in arteriosclerosis and coronary heart disease; in hypertension, hypertensive heart disease and rheumatic heart disease; and in congestive heart failure and heart disease due to vitamin deficiencies, respectively, make up the remainder of the program.

DERMATOLOGISTS FORM STATE ORGANIZATION

In Iowa City, on September 25, physicians actively in practice who limit their work to dermatology and syphilology formed an organization to be known as the Iowa Dermatological Society. Twenty-one doctors from eleven Iowa towns became charter members.

Dr. Ruben Nomland, professor and head of the Department of Dermatology and Syphilology at S.U.I., was elected the first president of the group; Dr. Lester W. Kimberly, of Davenport, was elected vice-president; and Dr. Robert G. Carney, professor of dermatology and syphilology at S.U.I., was elected secretary-treasurer.

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No. 12

Treatment of Dysfunctional Uterine Bleeding

A. W. DIDDLE, M.D., AND K. A. O'CONNOR, M.D.

KNOXVILLE, TENNESSEE

DYSFUNCTIONAL UTERINE bleeding is theoretically a hormonal disturbance between the pituitary and the ovaries. Sometimes hypothyroidism is associated with the condition. Treatment based on present day understanding of this problem is often modified by the age of the patient and the extent of the blood loss. This study is intended to illustrate the different methods of treatment used for the various sorts of women affected.

SUBJECTS

The 361 women with dysfunctional uterine bleeding whom we saw in private practice between January 1, 1949, and November 15, 1953, constitute the subjects of this study. Their age is given in Table I. Two-thirds of them had had one or more pregnancies, the majority were married and of average economic status, and most of them were of average height and weight for their ages. One in eight, however, was overweight, and one in 16 was underweight.

A fourth of the women had experienced genital surgery a few weeks to 20 years previously. In 58 cases the operation was uterine curettage; in 29, ovarian resection or oophorectomy; and in 9, uterine suspension or salpingectomy. Many of the 361 women had received some form of endocrine therapy.

SYMPTOMS

Abnormal uterine bleeding occurred as metrorrhagia, metrorrhagia and menorrhagia, in order of frequency. Only one in 14 of the women had sufficient blood loss to produce an anemia seri-

ous enough to warrant treatment for itself alone. The others had nuisance bleeding, either with no anemia or with a minimal degree of it. Instances of severe bleeding were most frequent in adolescent patients, in those treated formerly with small doses of irradiation to the ovaries and in those approaching or experiencing the climacteric. More than a fifth of the women had other functional disturbances, such nervousness, fatigue, dysmenorrhea, anxiety and frigidity. Of the others, though none would confess to them, it was obvious that many were experiencing environmental conflicts.

TREATMENT

For patients 25 or more years old who had severe or recurrent symptoms of either metrorrhagia or metrorrhagia and menorrhagia, either a diagnostic uterine curettage or repeated cytologic studies of the cervical and vaginal secretions were done to rule out neoplasia or pregnancy complications. These measures were applied to women under the age of 25 only if the degree

TABLE I
AGE OF PATIENT

Age in Years	No. Patients
12-20	29
21-30	137
31-40	91
41-50	86
Over 50	13
Unrecorded	5
Total	361

and duration of bleeding seemed to warrant them.

The treatments used are listed in Table II. If medical treatment proved unsatisfactory, all patients were instructed to return for reexamination or to report by telephone in two to six weeks, depending on the degree of bleeding. And even though they were free of symptoms, most of these women reported every six or eight months for periodic examination.

TABLE II
TREATMENT* FOR 361 PATIENTS

<i>Treatment</i>	<i>No. Patient</i>
Improved Hygiene of Living	273
Estrogens	35
Androgens	21
Hysterectomy	13
Thyroid	12
Irradiation	4
Blood Transfusion Alone	3

* Uterine curettage was considered to be a diagnostic procedure in this study.

The majority of women with minimal bleeding required no treatment other than improved hygiene of living and education regarding menstrual function. Those with irregular habits were instructed to sleep and to eat more regularly. The overweight woman was requested to eat less, and the underweight to eat more than usual. Those with emotional problems were reoriented with respect to some of their domestic and social difficulties.

Estrogens or androgens were given largely for hemostatic purposes during the first 14 to 21 days of the menstrual cycle, discontinued seven to ten days and then repeated. Estrogen sometimes was combined with progesterone or its derivative in the last few days of the cycle. Cyclic therapy was seldom extended beyond a three month interval. Androgens were usually employed in the older women. There were no adverse consequences if less than 250 mg. (as of testosterone propionate) was given in a single month. Usually less than 200 mg. was required. Estrogens were generally utilized in the younger person. They were discontinued or given in a more physiologic manner to those women who had been taking estrogens irregularly or for long periods of time and were having either withdrawal or break-through bleeding. Thyroid was used only if hypothyroidism was substantiated by clinical data, combined with blood cholesterol and basal metabolic studies. In that circumstance, treatment was often required indefinitely.

Irradiation was used where major surgical attack was impractical. In women over 40 years old who had completed their child bearing, hysterectomy was generally used if bleeding was a remittent nuisance or was excessive. That procedure was done because of excessive bleeding alone in only three instances. In ten other women,

varying degrees of uterine prolapse provided an additional indication for operation.

Blood transfusion alone was used in the care of adolescent patients with severe anemia. Sufficient blood was given to bring the blood count up to normal.

RESULTS

Instruction regarding menstrual function was appreciated by the patient and made her more receptive to treatment. Through hormonal therapy, favorable results were usually obtained, at least temporarily, in from one to three months. In a number of instances, however, dysfunctional uterine bleeding recurred after treatment had been discontinued. It is interesting that for most of those patients, spontaneous remissions subsequently occurred without further use of hormones.

DISCUSSION

There are four theories regarding the cause of normal menstrual bleeding: (1) withdrawal of estrogen; (2) withdrawal of progesterone; (3) withdrawal of either estrogen or progesterone; and (4) a factor "x" that selectively produces strong vasoconstrictor action on the coiled endometrial arteries, causing ischemia that leads to necrosis. Diapedesis of blood occurs when the arterioles reopen.

Estrogens and progesterone are in part complementary and in part antagonistic. Estrogens stimulate genital growth and uterine muscular activity, but inhibit production of the follicle stimulating hormone of the pituitary and are antagonistic to the action of progesterone on uterine muscle. Progesterone stimulates endometrial growth, but inhibits the production of the luteinizing factor of the pituitary and delays the stimulating action of the estrogens. Ovarian function is affected by these hormones through the pituitary. Androgens act on the pituitary in the manner of estrogens. To the contrary, they do not produce the withdrawal or break-through bleeding commonly seen with estrogens. For this reason they are the preferred hormone for treatment of the older woman with menstrual disturbances.

Dysfunctional uterine bleeding, as previously mentioned, arises from disturbed ovarian function. Also, neuropsychodynamic factors undoubtedly produce a pathogenic result in many instances. For example, Zuckerman⁴ observed that the internal genitalia of experimental animals responded to general neuromuscular as well as neurovascular changes that affect them specifically. That these reactions apparently alter the hormonal processes may be a reason for spontaneous remissions where the patient is treated as a whole without specific medication. It is apparent that dysfunctional menstrual irregularities frequently cannot be controlled until accompanying emotional conflicts have been released.¹ Jeff Miller³ made a similar observation more than 20

years ago, but actually the first allusion to the matter is to be found in St. Luke, chapter 8.

Endocrine treatment for dysfunctional uterine bleeding should be undertaken with discrimination and in line with present day knowledge of menstrual physiology. There are two problems in treatment, regulation and hemostasis. Ordinarily, regulation is unimportant, other than as a means of eliminating a nuisance to the patient, and attempts at achieving it are, in any event, frequently unsatisfactory. Hemostasis, in contrast, is important. Estrogens, progesterone, androgens and gonadotrophins or a combination of them, thyroid in selected instances, protamine sulfate or toluidine blue may be used to accomplish it. There are enthusiasts for each. Still, one should be chary about claiming favorable results with any of the medications, for only general measures such as rest, relief of accompanying emotional conflicts, proper diet and an adequate amount of iron are commonly succeeded by remissions. In addition, it is common that a patient has a misconception as to what constitutes "flooding" or "abnormal periods." Generally the injections of extracts of the anterior lobes of the pituitary of animals, serum of pregnant mares and chorionic products either are unreliable, have little value or have immunologic dangers.

Best results in the hormonal management of functional uterine bleeding that occurs from a cystic glandular hyperplasia or persistent proliferative endometrium are usually obtained when estrogens are used. Progesterone is indicated for those with bleeding from an imperfect progestational or mixed type endometrium. Usually, several days are required for the conditioning of the uterus. However, according to Greenblatt,² early hemostasis may be obtained by injecting a combination of 1.5 mg. estradiol benzoate, 25 mg. progesterone and 25 mg. testosterone propionate daily for five days, or by administering 20 to 25 mg. of stilbestrol orally every hour of the first day and twice during the second day. These treatments, however, may be impractical because of either expense, side reactions or withdrawal bleeding.

The use of hormones in the treatment of women with menstrual irregularities must frequently be modified on account of the age of the recipient. Commonly, their use in the older woman is undesirable, particularly for prolonged periods of time, for the presence of an early neoplasm may be camouflaged. For instance, among the last 300 women with uterine malignancies whom we have seen, one in 30 (one tenth) had been given hormones for weeks or even months because their physicians had assumed that their difficulty was dysfunctional bleeding. In addition, there is the controversial problem of an estrogen-cancer relationship. It is thus appropriate, in the presence of abnormal uterine bleeding, to ascertain the pres-

ence or absence of neoplastic changes or of complications of pregnancy.

Irradiation of the ovaries in the treatment of menstrual difficulties is usually confined to patients of menopausal age. Its use in younger women is inadvisable, for it is difficult to determine dosage of gamma irradiation so as to depress, but not destroy, ovarian function.

It is our experience that acute bleeding with severe anemia is usually corrected in the adolescent patient more satisfactorily by blood transfusion than by other means. Enough blood is given to raise the hemoglobin and red count to normal levels. Presumably, hormones and elements for clotting contained in the donor's blood counterbalance the abnormal stimulation to excessive bleeding.

Too frequently, a mild dysfunctional uterine bleeding is the reason given for hysterectomy in the young or middle aged woman. In the case of serious bleeding, a uterine curettage may be used to remove the source of abnormal stimulation—e.g., secretory endometrium—until medical measures can be utilized. Usually, only those who acquire anemia and fail to respond to less drastic procedures are rightfully subjected to hysterectomy. Total hysterectomy is recommended for women at or near the menopausal age if there is chronic anemia due to bleeding, if there is recurrence of bleeding after irradiation, or if, without anemia, there is recurrence of abnormal bleeding that does not respond to medical measures. Curettage should always antedate hysterectomy. Piecemeal surgery for the treatment of menstrual irregularities—procedures such as uterine suspension, ovarian resection or fundectomy—are only to be condemned.

CONCLUSION

A study of 361 women with dysfunctional uterine bleeding has shown that the age of the patient and the degree of blood loss are frequently the determining factors in the selection of a treatment. If emotional conflicts are concurrent with the abnormal bleeding, a satisfactory correction of the menstrual disturbance usually can be achieved only when the patient's peace of mind has been restored. Some patients have a misconception as to what constitutes abnormal menstrual periods. In the young or middle aged woman, most menstrual irregularities can be alleviated by non-surgical treatment. In older women who develop anemia or have persistent bleeding without anemia but in spite of medical treatment, definitive measures such as total hysterectomy are commonly used. Therapy in older women is more often surgical because of the possibility that a uterine neoplasm is being overlooked or that one may develop later. All treatments in women 25 or more years old are preceded by a uterine curettage or cytologic studies, or both, to exclude neoplastic or pregnancy complications. In women less than

25 years old, these procedures are used if abnormal bleeding persists or becomes acute. Endocrine therapy is given discriminately in line with known principles of menstrual physiology. Generally, three months is long enough time in which to evaluate the use of an endocrine in the treatment of the sort of woman described. If patients have recurrent episodes of abnormal uterine bleeding, continual vigilance should be exercised to sub-

stantiate the diagnosis of dysfunctional bleeding.

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Current Concepts and Treatment Of Dysmenorrhea

PARKER K. HUGHES, M.D.

DES MOINES

FEW CONDITIONS IN gynecology cause as much aggregate suffering and pain as does dysmenorrhea. During their most active years, many women are incapacitated for one or two days each month, and they have come to regard this malady as the normal price they must pay for womanhood.

Because of the lack of mortal consequences related to this condition, physicians have been inclined to consider it a minor and unimportant malady like the common cold. But employers of large groups of women find that dysmenorrhea is one of the frequent causes for absence from work. The Prudential Life Insurance Company, which employs 7,500 to 8,000 women, found in 1953 that 2,264 patients reported to its Health Service because of dysmenorrhea. Of those, 257 had symptoms severe enough to warrant their being sent home. Although this figure is probably high because of the employees' tendency to use that complaint to escape work, it still constitutes evidence of the frequency and the importance of the disorder.

Statistics kept by the Northwestern Bell Telephone Company in Des Moines, where 295 operators are employed, show that in the first 11 months of 1953, dysmenorrhea was the reported cause for 338 absences. These comprised 17.9 per cent of all the incidental absences in this group of women. A similar employee group at the Dubuque, Iowa, office of the Telephone Company had 251 absences, of which 32, or 12 per cent, were due to dysmenorrhea. The nurse at the Telephone Company feels that the incidence is actually higher than these figures indicate, inasmuch as many girls had reported cases of stomach trouble, some of which she is sure were uterine cramps. She found a similar incidence of dysmenorrhea among the clerical employees of the company, although as a whole the incidental time loss of the latter group was much lower than that of the operators.

Our therapy has been ineffectual, probably because of our lack of accurate knowledge of this condition. Although great strides have been made in recent years in understanding the physiology of the menstrual cycle, we are still very little nearer to discovering the true nature of pain associated with menstrual periods than were our predecessors 25 years ago. Incapacitating pain is not a symptom of normal menstruation, and when such pain occurs, it must result either from some disturbance of the normal physiology of menstruation or from pathologic changes in the female genital tract.

Let us now consider the clinical aspects of dysmenorrhea. It can first be divided into primary dysmenorrhea, which occurs shortly after the onset of the menarche, and secondary or acquired dysmenorrhea, which occurs later in the woman's menstrual life. Primary dysmenorrhea is generally considered to be much more common than is the acquired variety, and most frequently it is not associated with a demonstrable pelvic pathology. Secondary dysmenorrhea, occurring in older women, is less frequent, but it has a much higher incidence of pelvic pathology related to it.

Dysmenorrhea is basically a disease of young women, occurring most frequently in women under the age of 25 and often reported in women under the age of 20. It is more common in single patients than in married, and is much less frequent in women who have borne children than in the nulliparous female. Because of his early teaching, the physician has been led to feel that the dysmenorrheic girl is a rather hypo-ovarian individual and, frequently, is one who had a late menarche, that she has a scanty or inadequate period, and is likely to have underdeveloped female genital organs, particularly an infantile uterus. This same patient is typically shy and retiring. She often suffers from psychogenic mal-

adjustment and has many other psychosomatic complaints. Many physicians feel that dysmenorrhea is primarily of psychosomatic origin and point out that because young girls are inadequately prepared for their menstrual life, superstition and fear bring about much of the difficulty. Such terms as "the curse," "being ill" and "falling off the roof" show the underlying attitude of all women toward this supposedly normal function. Psychiatrists have often intimated that dysmenorrhea actually is the escape of an immature mind from the reality of womanhood and an attempt on the part of the maladjusted female to avoid her responsibilities and unconsciously to express her contempt toward being a woman. More recently, evidence has accumulated to show that, although there is a strong psychogenic factor in dysmenorrhea, many of these patients are not so disposed and that dysmenorrhea is actually a pathologic condition of somatic rather than psychosomatic origin. Schuck, working at New York University, studied 800 students with dysmenorrhea and pointed out that most of those women were normal, well-adjusted females who had physical incapacity only at the time of their periods. He compared 300 patients with dysmenorrhea with 300 women who did not suffer during their periods and found very little difference in the frequency of psychosomatic disease.

Actual pathology may be the basis of dysmenorrhea. Most notable among the causative conditions is endometriosis, but all forms of pelvic pathology, pelvic inflammatory disease, tumors of the uterus and ovary or malposition of the uterus have been proved to be etiologic in certain definite cases of dysmenorrhea.

Many of these impressions regarding patients with dysmenorrhea are the result of a physician's remembering one or two particular cases. Consequently, it seemed to me that it would be wise to analyze 100 unselected cases of dysmenorrhea that had appeared in our offices. By studying these cases, I felt that we might obtain some interesting facts concerning a relatively large group of women and from them be able more adequately to understand the clinical picture as a whole. All of these cases presented pain at the time of menses as their main and initial complaint. I feel that we can assume in all instances that the patients' dysmenorrhea was severe, since it was bothersome enough to cause their seeking medical aid for that condition alone. The results of these studies are shown in the following tables.

TABLE 1

REVIEW OF 100 CASES OF DYSMENORRHEA

Married	54
Single	46
Term Deliveries	16
Abortions	3

TABLE 2

TYPE OF DYSMENORRHEA

Acquired	29
Primary	71

TABLE 3

AGE AT TIME OF FIRST VISIT

15 to 20	30 patients
20 to 25	31 patients
25 to 30	14 patients
30 to 35	15 patients
Above 35	8 patients

TABLE 4

AGE AT THE ONSET OF MENARCHE

11 years	10 patients
12 years	30 patients
13 years	27 patients
14 years	10 patients
15 years	4 patients
16 years	3 patients
17 years	3 patients
Older	1 patient

TABLE 5

INTERVAL OF MENSTRUAL CYCLE

21 days	2 patients	29 days	4 patients
22 days	1 patient	30 days	14 patients
23 days	2 patients	31 days	1 patient
24 days	1 patient	32 days	1 patient
25 days	6 patients	33 days	6 patients
26 days	6 patients	34 days	1 patient
27 days	0 patients	35 days	6 patients
28 days	33 patients	Over 35 days ..	4 patients

TABLE 6

CHARACTER OF FLOW

Heavy	29 patients
Moderate	52 patients
Scant	12 patients

TABLE 7

PATHOLOGY—41 PATIENTS

Endometriosis	12
Uterine Pathology	16
Adnexal Pathology	6
Cervical Pathology	11

TABLE 8

UTERINE PATHOLOGY

Infantile uterus	7
Retroversion	5
Fibroids	2
Descensus	1
Double uterus	1

TABLE 9

CERVICAL PATHOLOGY

Erosion	10
Stenosis	1

TABLE 10

ADNEXAL PATHOLOGY

Ovarian cysts	3
Enlargement of ovary	3

TABLE 11
CORRECTED PATHOLOGY

Total cases with pathology	41
Inconsequential pathology only	21
Significant pathology	20

TABLE 12

Psychomatic disorders	20
Previous pelvic surgery	16
Surgery on tubes and ovaries	9
Uterine suspension	1
D & C	6

TABLE 13

Relieved after marriage	3
Relieved after pregnancy	8

An analysis of these patients provides proof for the already stated contention that most patients suffering from dysmenorrhea are otherwise normal individuals and must be suffering from some abnormal function of menstrual physiology. What, then, is the cause of dysmenorrhea? Many theories have been propounded, and based on those theories, many regimens of therapeutic approach have been devised.

As was suggested early in this paper, one of the earliest theories regarding the cause of dysmenorrhea was that it represented an incomplete development of the female genital organs and that small, infantile uteri, male distribution of secondary sexual characteristics and inadequate menstrual physiology were definitely associated with this condition. Our own figures and the findings of many others have shown that such cannot be the etiology in any large percentage of the cases. Unquestionably, a few cases of dysmenorrhea present the above described syndrome. Although no specific therapy for the correction of this condition exists at the present time, further growth and maturity generally resolve the problem for such patients.

Historically, the next most popular etiologic concept grew up as a result of the relief so frequently observed in patients after they had borne children. Early students of the problem then reasoned that painful menstruation must be due to cervical stenosis or some other obstruction of the menstrual outflow. With this thesis in mind, for many years gynecologists treated dysmenorrhea by cervical dilatation, frequently augmenting this dilatation by the insertion of a stem pessary to correct the supposed cervical stenosis and to correct a sharp anteversion of the uterus, which was often reported in such patients. Many encouraging results seemed to be produced by this approach. However, a careful analysis over a long period of time has shown that very few such patients were permanently benefited by the continued use of this type of therapy. Thus the procedure has dropped into infrequent use in recent years. The small number of cases in our own series would tend to substantiate those findings.

Workers then assumed that if these patients had no obstruction to the menstrual outflow, the colicky and cramp-like pains associated with the menstrual periods must be the result of spasmodic or unusually forceful uterine contractions. Early investigation by the insertion of a hydrostatic bag into the uterus during the contractions, showed that patients who had unusual pain likewise had abnormally forceful contractions. On the basis of those findings, an endless number of antispasmodic drugs aimed at producing smooth muscle relaxation became the most frequently used form of therapy. This type of medication is still widely used, and almost every physician has a particular antispasmodic drug which he feels is the most effective in relieving these symptoms. But in recent years some element of disbelief has come to replace physicians' confidence in that theory, for it has become apparent that the results of the hydrostatic bag experiment may not have been valid. Because, as is generally known, the uterus attempts rather violently to expel any foreign body from within its cavity, it is now generally conceded that the forceful contractions which were taken as proof of the theory were probably the attempt that the uterus made to expel the bag, rather than the attempt of the uterus to rid itself of the menstrual contents.

Diehl and his coworkers in 1948 developed an improved method for measuring the force of uterine contractions and fairly conclusively proved that there is no difference in the force of uterine contractions as between the dysmenorrheic patient and the normal individual. He further studied the effect of various drugs on the force of uterine contractions and could not demonstrate any appreciable difference achieved through the use of most of the common antispasmodics, such as Pavatrine, Trasentine and Depropanex. Most of the present day workers grant the validity of Diehl's work. A survey of our own cases substantiates these findings, in that many patients were improved, but practically none of them were entirely relieved by the administration of the various antispasmodic remedies.

Since the entire physiology of the menstrual cycle is under endocrine control, it would seem logical to suppose that dysmenorrhea has some endocrine background or is due to some imbalance of the endocrine interplay during the menstrual cycle. In 1938 Wilson and Kurzrok observed that women with anovulatory cycles do not have painful menstruation. This observation has been borne out repeatedly by many hundreds of observers and students of dysmenorrhea since that time. It would therefore follow that progesterone, which is produced only after ovulation, must play a vital role in the production of the pain of dysmenorrhea. Contraction studies on the uterus in animals and also in human beings have fairly conclusively shown that uterine contractility is entirely under the control of the steroid hormones and that stimulation of the sympathetic and parasympathetic

nerve supply to the uterus has no effect upon its contractility. These studies demonstrated that estrogen has a marked vasodilating effect on the uterine blood supply, whereas progesterone seems to exert a vasoconstricting effect. This is further borne out by the knowledge that in a normal menstrual cycle with a development of secretory endometrium and the subsequent slough of this endometrium during menstruation, there is a marked spasm of the spiral arterioles in the basilar layer of the endometrium. The ischemia produced brings about degeneration and slough of the endometrium. This slough does not occur in bleeding from anovulatory cycles. These facts form the cornerstone of the currently most acceptable theory as to the cause of dysmenorrheic pain. It is reasoned that because of an imbalance between progesterone and estrogen, and possibly because of the existence of a menstrual toxin such as that described by the Smiths, the ischemic uterine contractions lead to the accumulation of muscle metabolism products resembling lactic acid. The retention of these metabolic products in the uterine musculature, as in skeletal muscles, leads to the production of spasmodic and cramp-like pain. Practically all of today's students of this subject accept the philosophy that the pain is basically due to the vasomotor disturbance within the uterus, producing uterine ischemia.

This concept opens three pathways of therapeutic approach: (1) the elimination of progesterone by preventing ovulation; (2) the use of vasodilating drugs; and (3) presacral neurectomy to bring about vasodilatation as well as to block the afferent pathways of pain from the uterus. Each of these treatments has many enthusiastic advocates among today's gynecologists.

It has been conclusively proved that by the administration of estrogen or testosterone in the pre-ovulatory phase of the menstrual cycle, ovulation can be prevented. It is probable that the hormones achieve that result by inhibiting the pituitary and thereby eliminating the pituitary stimulus to ovulation. Stilbesterol administered in 1 to 5 mg. doses daily from the end of the menstrual period for approximately 20 days will accomplish this effect. In patients who cannot tolerate stilbesterol therapy because of nausea, the same results can be obtained by administering comparable doses of the natural estrogens. Testosterone administered in the form of methyl-testosterone tablets, 10 mg. three times a day prior to and through the period of ovulation, is likewise said to be successful. However, the estrogen therapy seems to have had a greater degree of success in most men's hands. Most patients so treated obtained complete relief from their dysmenorrhea the first cycle. Those who have no success in the first cycle will generally obtain success by the end of the second one. The results from this treatment are generally complete, and very few cases report improvement only. Hulme and Holmstrom, reporting in 1953, said 89.7 per cent of their patients were completely

relieved by this method. Schuck, in his large series of less carefully supervised students at New York University, reported that 60 per cent had relief. This method of treatment is not limited to patients with primary dysmenorrhea. It has been used for several years with almost equally successful results in patients with endometriosis. In addition to relieving the pain, it seems to halt the progression of the disease, though of course it does not *cure* the condition.

There are certain limitations, however, to the employment of this type of therapy. Menstrual irregularities are likely to ensue, and on occasion excessive bleeding, if anovulatory cycles are produced for too many successive months. Consequently, the therapy must occasionally be interrupted when the bleeding irregularities develop, and should not be reinstituted until the patient again has a normal and painful menstrual cycle. Novak advocates using a dosage of 1 mg. daily, an amount which is usually sufficient to accomplish the results and which is much less likely to produce menstrual irregularity than are the larger doses. The only other undesirable effect from this therapy is in those patients who cannot tolerate stilbesterol. However, this disadvantage, as has been previously mentioned, can generally be overcome by the use of some other form of estrogen.

Greenblatt, in 1951, proposed the use of Priscoline, an adrenolytic type of drug, to produce vasodilatation in the uterus. He administered this to a series of 40 patients as soon as the symptoms of pain developed. The drug was given in 25 to 50 mg. doses, every four to five hours. First, he used the oral route; secondly, he used the subcutaneous route; and, finally, he combined the therapy, giving the drug both orally and subcutaneously. His results were very encouraging in that he obtained 65 per cent good results by the oral route, 60 per cent by the subcutaneous route, and 80 per cent by the mixed treatment. The unfortunate corollary, however, was that a very high percentage of these patients had marked and annoying side effects from the administration of the drug. Sixty per cent of the group treated by the combined method had these marked reactions. Thus, only 20 per cent of those treated obtained relief without the substitution of symptoms almost as disturbing as those produced by the primary condition. Since Greenblatt's work, various investigators have tried many other drugs of a similar pharmacologic action, but have met with mediocre results, although in theory this should be a very effective form of therapy.

There are advocates of the surgical approach to almost all medical problems. This has long been true of dysmenorrhea. Surgical approaches have generally been completely unsuccessful, as is evidenced by the frequent failures of cervical dilatation, ovarian and tubal resections and uterine suspensions. Pre-sacral neurectomy has been used as a method of relief of pelvic pain for many years, but recently it has been advocated much more

frequently, especially in the treatment of primary dysmenorrhea or acquired dysmenorrhea due to endometriosis. The uterus obtains its nerve supply from the hypogastric plexus and from the pre-sacral nerve, both of which are thought to be primarily sympathetic. The parasympathetic nerve supply to the uterus comes primarily from the broad ligament plexus which supplies both the uterus and the ovaries. Section of these nerves is not an unusually difficult procedure, particularly section of the pre-sacral nerve or hypogastric plexus, which can be approached between the common iliac arteries on the anterior surface of the fifth lumbar vertebra, and interrupted by block dissection of the areolar tissue in this area. The broad ligament plexus is more difficult to identify and excise, so that some workers have advocated its interruption by ligation and severance of the infundibulopelvic ligament. This procedure, no doubt, would interrupt the nerves, but most of us would be very doubtful about the wisdom of interrupting such a large portion of the ovarian blood supply. Success from this form of therapy has recently been reported in as many as 80 to 98 per cent of the cases treated. But even the advocates of such therapy insist that all forms of medical treatment should be tried prior to the institution of surgery. In order to eliminate the purely psychogenic patient, it has been suggested that surgical intervention be employed only if relief is obtained by the inhibiting of ovulation. Thus, the case would fall into the somatic rather than into the psychosomatic group. Likewise, such radical treatment necessitating abdominal surgery should be undertaken only in the most severe cases. As a standard, several men use complete incapacity for at least 24 hours.

Again, let us look at the 100 cases of dysmenorrhea that we have reviewed, and see what therapeutic results were obtained with these many possible therapies.

TABLE 14
TREATMENT

Type	Number	Excellent	Improved	Failed
Antispasmodics	60	4	34	22
*Stilbestrol	32	17	14	1
Surgery	17	7	1	9
Pessaries	7	2	0	5
Testosterone	7	2	2	3
Other drugs	5	0	2	3
Douches	2	0	2	0
Psychiatric Rx	1	0	1	0

* Sixteen patients had recurrence after stilbestrol withdrawal.

TABLE 15
SURGICAL TREATMENT

Type	Number*	Excellent	Improved	Failed
Neurectomy	1	1	0	0
Oophorectomy	2	1	1	0
Hysterectomy	2	2	0	0
D & C	5	0	0	5
Suspension	1	1	0	0
Vaginal repair	1	1	0	0
Cauterization	6	1	1	4

* One patient underwent two operations.

From these findings, I think we can definitely conclude that at present the most successful results can be obtained by the inhibition of ovulation with estrogenic hormones. None of our therapy, we must admit, is entirely satisfactory, but by carefully studying each patient and devoting adequate time to her treatment, we can obtain fairly successful results.

If major pelvic pathology is present, the treatment for this specific condition will generally afford relief. The large group of cases which present no major pelvic pathology, I feel should be approached in the following manner. First, the patient should be thoroughly educated as to the problems of dysmenorrhea and the functions of the menstrual cycle. Careful evaluation of the psychosomatic element in each particular case is of paramount importance, and often mere reassurance, with the institution of hygienic measures such as exercise, and the avoidance of invalidism, constipation or excesses in diet, will provide a satisfactory degree of relief. In these milder cases, the addition of an antispasmodic drug, particularly if incorporated with some analgesic drug, will rehabilitate most of the patients. In moderately severe cases whose pain lasts for several days and for whom bed rest for one or two days is necessary, more active treatment must be employed. For this group the administration of stilbestrol, 1 mg. a day for 20 days after the end of the period, will in most instances produce relief, and, probably more important, by producing this relief it will break the endless chain of severe and incapacitating episodes of pain. With this relief, the patient will become psychically more at ease and will be relieved from the marked apprehension and dread of each successive menstrual period. Frequently one or two courses of such therapy will give the patient enough mental peace so that she can be rehabilitated without further treatment. In more resistant cases, this course of therapy can be employed repeatedly for several years, so long as one does not persist to the point where marked menstrual irregularity is obtained.

Very few cases necessitate more therapy than is outlined above, but possibly in a very limited number of cases in whom all medical treatment fails and in whom the psychosomatic element has been largely ruled out, the use of pre-sacral sympathectomy is justifiable. This should be limited to an extremely small percentage of cases.

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Heart Disease in Pregnancy

GERALD F. KEOHEN, M.D.

DUBUQUE

AS DEATHS FROM toxemias, hemorrhage and infection have declined, heart disease has become an increasingly important factor in maternal mortality. So far as the incidence of heart disease in women of childbearing age is concerned, there is little hope of any immediate improvement. In fact, with the advent of surgical relief of mitral stenosis, the number of cardiac problems in pregnancy that face the physician is likely to increase, for a damaged heart is no longer being regarded as a deterrent to marriage. Yet, the outlook need not be considered gloomy, for it has been demonstrated that with proper management, pregnancy can be made a relatively safe experience for most women with heart disease. It is no longer general practice to discourage all women with organic heart disease from becoming pregnant, and those of us who see only a few cases should guard against becoming pessimistic because of one or two unfortunate experiences. Rather, we should bend our efforts toward better care and supervision of such patients, and it may be possible to reduce their mortality rate to an acceptable minimum.

The incidence of heart disease in pregnant women varies from 1 to 2 per cent. Stenosis and incompetence of the mitral valve are the anatomical lesions most frequently encountered, although aortic valvular lesions and combined lesions of the aortic and mitral valves are not uncommon. Heart disease due to congenital defects, hypertension, coronary sclerosis or hyperthyroidism can be seen only infrequently during pregnancy. It is rheumatic heart disease of the inactive variety that accounts for at least nine out of ten cases in the childbearing age group, and, actually, when one speaks of heart disease in pregnancy, he is talking about inactive rheumatic heart disease unless he indicates otherwise.

THE CIRCULATION IN PREGNANCY

An understanding of some important changes in the circulation that occur with pregnancy will

greatly assist in the proper management of cardiacs during this time. Increased cardiac output is the most significant alteration in the circulation. At the time of maximum increase, the minute volume output is 35 to 50 per cent above normal. The increase in cardiac work begins about the twelfth week of pregnancy and attains its peak about the thirty-second week. The circulatory burden diminishes after that time, the cardiac output gradually decreasing somewhat until term. It is noteworthy that the greatest incidence of heart failure occurs around the thirty-second week of pregnancy. If the patient goes through that week without any signs of heart failure, her chances of completing the pregnancy without any serious trouble are good. Increase in blood volume follows the same trend as the waxing and waning of the cardiac output. Expansion of blood volume is due almost entirely to increase in plasma volume, which dilutes the erythrocyte count and produces the so-called physiological anemia of pregnancy. Associated with the increase in blood volume, there is an increase in extracellular fluid volume. During gestation, there is positive sodium balance resulting in water retention, and this may be the fundamental alteration in metabolism that can be controlled. Increase in blood volume undoubtedly is an important factor in precipitating heart failure in pregnancy and may be responsible for the increased incidence of acute pulmonary edema. From the twelfth week of gestation until after term, it is certainly dangerous to burden the circulation further with intravenous infusions, particularly those containing sodium, and it is equally dangerous to induce premature labor while the heart is subjected to an increased circulatory demand.

In summary, there are three factors which enhance the liability to heart failure in pregnancy: increase of cardiac output, increase of blood volume, and retention of salt and water. These alterations, from the non-pregnant state, appear to be closely bound together. Therefore, in order to re-

duce the incidence of heart failure in pregnancy, water retention must be held to a minimum by restriction of salt intake.

The diagnosis of heart disease during pregnancy must be made cautiously, since there are many cardiovascular symptoms and signs which may be misleading, especially during the last trimester. Examination of the patient before she is pregnant or during the first trimester is to be desired. Shortness of breath is almost always present in the latter months of pregnancy, as is slight ankle edema in the afternoons and evenings. Palpitation is a rather frequent complaint because of premature systoles or the overactivity of the heart as a result of increased output. Mild tachycardia is often present. Since the heart assumes a more transverse position with elevation of the diaphragm and increased lordosis, one may have the impression that the heart is enlarged. Systolic murmurs in the pulmonic region are present in almost all pregnant women, and apical systolic murmurs are found in about 15 per cent. Almost one out of ten in whom heart disease is diagnosed late in pregnancy is found to have a normal cardiovascular system at postpartum examination.

EVALUATION OF RISK

The evaluation of risk involved in any pregnancy does not revolve around the number and nature of the anatomical valvular lesions. The most important factor is the myocardial reserve. Ability to perform the ordinary daily activities before pregnancy is the most reliable criterion of cardiac reserve. A history of congestive heart failure, hemoptysis or paroxysmal dyspnea indicates that the additional circulatory load of pregnancy is likely to produce a difficult situation. Definite evidence of cardiac enlargement, signs or symptoms of pulmonary congestion, electrocardiographic evidence of myocardial damage, heart block, intraventricular block, tachycardia and auricular fibrillation all forecast the possibility of an unfavorable course. However, even these findings must be correlated with the patient's tolerance of physical activity.

The overall risk of maternal death from heart disease probably should not exceed 5 per cent. In those women who have cardiac functional capacities in Classes I and II, the mortality should be well below 5 per cent. When the functional capacity is graded as III or IV, pregnancy may result in a maternal mortality above 10 per cent. Age is also a considerable factor in assessing fitness for pregnancy. It has been frequently noted that there is a higher incidence of heart failure and greater mortality in those over 30 years of age and especially in those over 35 years of age. Active rheumatic carditis is a grave but, fortunately, a rare complication of pregnancy. The diagnosis of an active rheumatic process is made more difficult by the slight leukocytosis and elevation of the erythrocyte sedimentation rate found

in normal pregnancy. Sub-acute bacterial endocarditis during gestation is quite uncommon, but certainly adds to the risk. Many have been successfully treated with antibiotics in recent years. This complication is more likely to occur postpartum, but can usually be prevented by the use of antibiotics during and immediately following labor.

Congestive heart failure is the most common cause of death in pregnant women with rheumatic heart disease. However, the most feared complication is acute pulmonary edema. It occurs with unpredictable suddenness, and it is less responsive to treatment in the pregnant patient than it is in others. Paroxysmal pulmonary edema is encountered much more frequently during gestation and in the immediate postpartum period than in the non-pregnant state. Increased blood volume probably is responsible for the higher incidence of pulmonary edema during pregnancy. Although right heart failure is overshadowed by acute pulmonary edema during pregnancy, it becomes an imposing problem in the postpartum period. Thromboembolic phenomena occur more frequently in the pregnant cardiac patient and account for occasional deaths.

PREVENTION OF HEART FAILURE

Heart failure is the principal problem in cardiac patients who are pregnant, and the most important phase of antenatal supervision is the prevention, or early recognition and treatment, of this complication. Preservation of myocardial reserve is accomplished primarily by instituting a program of adequate rest. The preventive and therapeutic value of increased amounts of rest is considerable. It is the most practical means of compensating for the increased demand placed upon the heart by pregnancy. Those women who are in functional Classes I and II should have at least 10 hours of rest each night, and should lie down for short periods after meals. They may perform light housework and can be permitted a limited amount of walking on the level. Climbing hills and stairs should be restrained to a minimum. Heavy housework, prolonged shopping tours, dancing and other physical strain must be prohibited. The amount of rest required by those who have cardiac disabilities resulting in functional classification of III or IV is proportionately greater.

The three factors which most frequently initiate congestive heart failure during pregnancy are undue fatigue or physical exertion, unrestrained sodium intake, and intercurrent respiratory infections. One cannot emphasize too strongly the importance of bronchitis, influenza or even the common cold in precipitating heart failure during pregnancy. Patients who develop these infections should be put to bed and should remain at bedrest until they are completely recovered. Of course, appropriate treatment of the infection should be instituted at the same time. Other factors which

may precipitate heart failure include anemia, the onset of an arrhythmia, embolic phenomena or other complications of rheumatic heart disease.

Frequent visits to the physician must be encouraged, and certainly every two weeks is not too often. If there is any suspicion that the patient is not progressing normally, the visits should be increased to once each week. Gain in weight during pregnancy should be limited to 15 or at the most 20 pounds. There should be some restriction of salt intake, particularly in those who are in functional Classes II, III and IV. A diet which contains the equivalent of 2 grams of sodium chloride may be adequate, although in some patients the sodium intake will have to be limited to 500 milligrams. Patients should be encouraged to report any unusual symptoms, especially a cough, for this symptom may precede definite dyspnea or edema. Shortness of breath when the patient has engaged in an ordinary activity, a weight gain of three or more pounds during any week, vomiting, dysuria, fever, palpitation or aching joints are other symptoms which should be reported to the physician.

Early signs of heart failure should be searched for during every visit to the physician. In pregnancy the earliest sign of heart failure is pulmonary congestion. Edema in the lower extremities and increased venous pressure in the cervical veins are not the first signs to appear in pregnancy. Transient rales, particularly in the right lung base posteriorly, are quite common during pregnancy, but persistent rales in either pulmonary base should be considered as evidence of heart failure. One of the most reliable signs of early pulmonary congestion during pregnancy is a reduction in vital capacity. In normal pregnancy the vital capacity is not reduced at any time. When the vital capacity diminishes as much as 10 to 15 per cent from its previous level, pulmonary congestion must be assumed present, and treatment should be started. X-ray and fluoroscopic examinations also aid in detecting early pulmonary hyperemia. Right heart failure is manifested by unusual increase in weight, increased venous pressure in the veins of the neck and upper extremities, and, finally, edema of the lower extremities.

The treatment of heart failure during pregnancy does not differ from the usual methods, except in that it may have to be more intensive because of the increased circulatory load which is present even when the patient is at rest. Bedrest and chair-rest are, of course, important, and once the patient has developed heart failure during pregnancy, she must be required to spend most of the day in bed or in a chair until she has delivered. Sodium intake should be restricted to 500 milligrams, or less. The use of cation exchange resins appears to be safe, although disturbance in electrolyte balance, particularly potassium deficiency, should be watched for carefully. The patient

should be digitalized with one of the several preparations that are available, the choice being the one with which the physician is most familiar. If the situation indicates need for rapid digitalization, one of the intravenous preparations, such as ouabain, lanatosid C, or Digoxin, can be used with relative safety. Once digitalis therapy has been instituted during pregnancy, it should be continued at least through two weeks postpartum. Mercurial diuretics are very useful, and there should be no hesitation in using them. There has been no good evidence to show that renal damage or abortion are produced by mercurial preparations. Acute pulmonary edema necessitates urgent treatment and responds less readily than in the non-pregnant individual. Morphine should be given immediately, and oxygen should be administered as soon as possible. Aminophyllin is helpful, but should not be given intravenously if there is any evidence of peripheral failure. Venesection is very useful, although it has been much neglected in recent years. Oxygen and ethyl alcohol vapor under positive pressure may be a lifesaving measure. Paroxysmal tachycardia is not common during pregnancy, but may precipitate heart failure when it does occur. Quinidine should not be used except in desperate situations, for it has a tendency to initiate labor pains. A digitalis preparation will control most of the tachycardias encountered. If heart failure does not occur until near the time of maximum circulatory load, that is, about the thirty-second week, the prognosis is good. When heart failure appears before the twenty-eighth or thirtieth week, the outlook is poor.

TECHNIC OF DELIVERY

The method of delivery of pregnant women with heart disease is determined by obstetrical rather than by medical considerations. The safest means of delivery appears to be through the natural passages. Mortality rates certainly favor vaginal delivery, and the only cardiovascular indication for cesarean section is coarctation of the aorta. The effort or straining accompanying the second stage of labor is a hazard, but it can be largely avoided by judicious and skillful obstetric interference. There is no rule for use of anesthetics except that adequate oxygenation must be maintained. Although ether is probably the best tolerated general anesthetic, no single anesthetic agent possesses outstanding advantages. Rather, the skill of the anesthetist is most important. Low spinal, caudal or pudendal blocks are all useful means of obtaining regional anesthesia. Should tachycardia in excess of 110 beats per minute, or tachynea over 22 per minute occur and persist during delivery, heart failure is likely to be impending.

Oxytocic drugs should not be used routinely during or following the third stage of labor. Posterior pituitary extracts and ergot preparations

may increase venous pressure and even provoke myocardial ischemia and ventricular arrhythmias. During the first four days postpartum, there is still danger of acute pulmonary edema. Continued rest in the postpartum period is important, but the length of the rest period will vary according to the state of cardiac compensation. Adequate antibiotic therapy should be instituted with the onset of labor and should be continued for at least four days postpartum. Penicillin, given in a dosage of 400,000 units intramuscularly twice daily, offers adequate protection against bacterial endocarditis.

The circulatory changes which occurred during pregnancy return to normal slowly, and it may be several weeks before the cardiac output has decreased to its usual level. Even though the patient appears to be doing very well, it is wise to continue bedrest for several days and then gradually to let her progress to chair sitting and ambulation.

FUTURE PREGNANCIES

During the postpartum period, the question of future pregnancies should be discussed. If the patient showed no signs of decompensation during pregnancy, it is justifiable to permit her to have another child. If she developed even minimal heart failure during pregnancy, however, she almost certainly will decompensate during any succeeding pregnancy.

There is no real evidence to indicate that childbearing aggravates an existing lesion in rheumatic heart disease. It has not been shown that one or more pregnancies shorten the life of women having a rheumatic heart lesion. There is no significant difference in the average age at which death occurs among parous women having rheumatic heart disease and among men similarly afflicted. The annual mortality rates for nulliparous and parous women with rheumatic heart disease are about the same. It should be recognized, however, that the nulliparous group may include some with disease of such severity as to preclude marriage or even any attempt at childbearing.

SUMMARY

Pregnancy increases the work of the heart. The peak of this circulatory load occurs about the thirty-second week. The outlook depends upon the myocardial reserve, and if this is sufficient to carry the patient through the thirty-second week without heart failure, there is little danger of failure thereafter. Usually failure can be controlled if discovered early and treated well. Prevention of failure is facilitated by increased rest and by restriction of sodium in the diet. Early diagnosis of heart failure is essential and can be readily accomplished by frequent examinations of the patient for signs of pulmonary congestion. A better understanding of the circulatory changes in pregnancy and more attention to the prevention and early treatment of heart failure should reduce

maternal mortality in women with rheumatic heart disease to the point where it is a rarity.

LUNG CANCER SURVEY IN IOWA

Volunteer researchers for the Iowa Division of the American Cancer Society began their third, and probably last, follow up of 10,573 Iowa men between the ages of 50 and 69, as a part of a national study to determine whether there is a relationship between the use of tobacco and the incidence of lung cancer.

Though returns from the third step of the investigation are as yet unavailable, results of the first and second steps seemed to indicate that such a relationship exists. When the 1953 investigation was made, 50 of the 291 deaths among members of the group since January, 1952, had resulted from cancer, and of that number lung cancer had been responsible for 9.

The project was undertaken for two reasons, according to Dr. S. F. Singer, Ottumwa, president of the Iowa Division. "First," he said, "a number of studies in the past have indicated that smoking may be an important factor in causing cancer of the lung. Second, and most importantly, death rates from lung cancer have been increasing alarmingly and are continuing to increase. Here in Iowa, the incidence has increased 62 per cent in the past five years. Thus it is of utmost importance that we discover the cause as soon as possible."

As regards the final steps in the survey, Dr. Singer said, "When the cause of death has been determined from death certificates and other medical records, statisticians at the national ACS office in New York City will use the data to determine whether death rates from cancer are any greater among smokers than non-smokers."

DERMATOLOGY MEETING

The twelfth annual meeting of the American Academy of Dermatology and Syphilology, in Chicago, December 4 to 9, is to include addresses by Dr. Arthur C. Curtis, of the University of Michigan, on "Essential Familial Hypercholesterolemia, and Secondary Xanthomas"; Dr. Sidney Farber, of Harvard, on "Lipoidoses in Children"; by Dr. Frederick Urbach, of Buffalo, on "Treatment of Xanthomas"; and another by Dr. Farber on "Biological and Chemical Approaches to the Treatment of Cancer."

The sessions, which are to be held at the Palmer House, Northwestern University, the University of Illinois College of Medicine, and at the Billings Hospital of the University of Chicago, will include 15 symposia and 12 roundtable discussions. There also will be 22 scientific exhibits and 89 technical exhibits.

The Role of The Private Physician in Tuberculosis Control

KARL H. PFUETZE, M.D.*

CHICAGO, ILLINOIS

FOR MORE THAN half a century, the private physician has played a very important role in the program for tuberculosis control. In case finding there is no substitute for the able private physician who is conscious of the tuberculosis problem and ever on the alert to discover it among his patients. By virtue of his position, he has inevitably been in the "front line," so to speak, in the campaign to find tuberculosis.

Tuberculosis has always been notorious for its insidious onset. If it is to be discovered in the early stages when it is most easily and quickly cured, it must be looked for among patients who have no symptoms referable to the chest. All too often the disease has reached the advanced stages before symptoms have prompted the patient to seek medical help. Even now, despite widespread publicity and X-ray surveys, the large majority of patients entering sanatoria have advanced tuberculosis. Thus, the active interest and cooperation of the private physician are essential if this preventable and unnecessary disease is ever to be eliminated.

To take an effective part in the campaign against tuberculosis, the average physician need have no special training or experience. Nor does he need a great deal of special and expensive equipment. What he does not have in his office is always available in a nearby hospital, such as X-ray facilities and a laboratory for sputum examinations and gastric cultures. The old and reliable tuberculin test is a quick and effective means for determining whether a person is infected with tubercle bacilli. The test is easily done in the office and is inexpensive. As with all other diagnostic procedures, of course, it must be done properly, and care must be taken to use a proper dilution of old tuberculin or P.P.D.

If the reaction is positive after 48 to 72 hours, a chest X-ray should be taken to rule out the presence of pulmonary tuberculosis. Though other forms of tuberculosis may be present, pulmonary tuberculosis is by far the greatest hazard from the public health standpoint and should be looked for first. Since accurate X-ray diagnosis is of primary importance, the average physician is well advised to have his chest films reviewed by a

radiologist or chest specialist. If the chest film suggests the possibility of active tuberculosis, a series of several sputum examinations or gastric cultures will usually, though not always, reveal the presence of tubercle bacilli. If, in the first series, sputum examinations or gastric cultures are negative, it may be necessary to repeat these procedures at intervals of about two months until the physician is satisfied that activity is not present. And because tuberculosis tends to reactivate, it is necessary to follow even inactive cases with periodic chest films, indefinitely.

The family physician also plays an important role in examining and following suspicious cases discovered in community or industrial X-ray surveys. He is the logical man to do this, and he should be able and willing to assume this responsibility.

The mass community X-ray survey as a case-finding procedure has proved its value, but it has certain aspects that limit its usefulness. Such surveys are not usually feasible oftener than every five years in the same community, and many things can happen in five years! Moreover, unless a high percentage of the population (at least 80 per cent) 15 years of age and older is surveyed, many cases of active tuberculosis will be missed. So other case-finding measures must also be vigorously pursued.

Perhaps the most effective and relatively most inexpensive method of tuberculosis case finding is that in which all patients admitted to general hospitals receive routine chest films. This method has proved its value in many hospitals throughout the country and has the support of leading radiologists and internists. Based on the number of X-rays taken, such a program will uncover three to five times as many cases of significant tuberculosis as may be found by a community-wide X-ray program. Extra dividends to be had from such a program are the many other unsuspected chest conditions which are discovered, such as bronchogenic carcinoma and other tumors. Indeed, many of our leading radiologists believe that routine chest films on all hospital admissions are justified by the number of significant non-tuberculous chest diseases which are discovered by this means. And it is now generally recognized that examination of a patient is not complete without a chest X-ray. Private physicians could per-

* Medical Director and Superintendent, Chicago State Tuberculosis Sanitarium, and Clinical Professor of Medicine, University of Illinois College of Medicine.

form a distinct service by working for routine chest films on all admissions to the hospitals where they take their patients.

SANITARIUM CARE FOR THE TUBERCULOUS

Treatment of tuberculosis in a sanitarium is to be recommended in the great majority of cases. Despite the remarkable advances which have been produced by anti-microbial treatment in the past few years, tuberculosis is still a treacherous, unpredictable and stubborn disease, and requires the best medical judgment available. In the modern sanitarium, the physicians, nurses and auxiliary personnel are trained and experienced in the management of tuberculosis. The patient now, as in the past, must be educated regarding the nature of his disease and what he must do to recover and stay well. In a sanitarium the patient is better able to grasp and retain these essentials and can profit by association with the other patients. Moreover, with proper anti-microbial therapy, and with surgical intervention when indicated, the patient's stay in the sanitarium is usually much shorter now than it was a few short years ago in similar cases.

Because sanitarium care is still desirable and necessary in a large percentage of cases, the family physician has the responsibility of persuading the patient to accept it. He has the confidence of the patient and the patient's family, and he is the one who can most easily convince the patient that sanitarium care is best for him.

CURRENT CHEMOTHERAPY OF TUBERCULOSIS

The anti-microbial therapy of tuberculosis has changed so rapidly in the past few years that even physicians specializing in treating the disease find it difficult to keep abreast of the latest developments. Is it any wonder, then, that the average family physician may be puzzled as regards the optimum drug regimen for a given patient?

It is now more than two years since isoniazid became available for general use in the treatment of tuberculosis. Laboratory research and clinical investigation have established it as a very valuable adjunct to our armamentarium. Though much remains to be learned, certain concepts have emerged that can be accepted for current use. Like other valuable drugs, it has limitations as well as assets. Valuable as it is, it is not a "cure-all." It should not be used alone, for drug resistant organisms emerge rather rapidly, usually within two or three months. Used in combination with streptomycin and/or para-aminosalicylic acid (PAS), isoniazid delays the emergence of drug resistant organisms significantly. Thus, in combination with other medications, the new drug has a greatly prolonged therapeutic effect.

For isoniazid, the dosage schedule most commonly used at present is 100 mg. t.i.d. for the average adult, or about 5 mg. per Kg. of body

weight. In therapeutically effective levels, the drug is diffused readily in all body tissues. Studies indicate that it even diffuses readily in fibro-caseous lesions in the lungs and lymph nodes. Though larger dosages have been proposed, as yet there is little evidence to indicate that larger amounts are more effective clinically. Furthermore, undesirable side reactions such as peripheral neuritis, vertigo, hyperreflexia and positional hypotension are more apt to occur with the higher dosages. The recommended dosage rarely produces serious side effects. However, the drug should be used with caution in patients who have histories of epilepsy or psychosis.

Extensive research and clinical investigation are being conducted by the Veterans Administration, Army, Navy, U.S.P.H.S. and others in an attempt to determine the optimum chemotherapeutic regimen for pulmonary tuberculosis. It is not the purpose of this paper to go into much detail regarding chemotherapy. However, each of the following regimens gives favorable results in most cases of pulmonary tuberculosis, though no single one of them as yet has found general acceptance as being definitely better than the others.

1. Isoniazid 100 mg. t.i.d. and streptomycin 1 Gm. intramuscularly twice weekly

2. Isoniazid 100 mg. t.i.d. and PAS 12 Gm. daily in three divided doses orally

3. Isoniazid 100 mg. t.i.d., streptomycin 1 Gm. intramuscularly twice weekly, and PAS 12 Gm. daily in three divided doses.

4. Streptomycin twice weekly and PAS 12 Gm. daily (Some physicians still prefer this regimen in selected cases, their idea being to save isoniazid for future use, particularly as an "umbrella" if surgical intervention becomes necessary.)

Further investigation will undoubtedly reveal which regimen is preferable for most cases, and to this end we must be patient. However, all workers are agreed that a combination of at least two agents should be given concurrently to delay the emergence of drug resistant organisms. There is also general agreement that the combined chemotherapy should be administered continuously and for a prolonged period. The minimum duration of drug therapy is six months, and many of us feel that a minimum of a year is often desirable, even for the early cases. Though there is no established optimum duration for chemotherapy, there is a very definite trend toward longer and longer terms of continuous administration, extending to periods of 18 to 24 months and more.

During the past year or so, several investigators have pointed out that isoniazid-resistant tubercle bacilli recovered from patients receiving this drug seem to have lost their pathogenicity. These isoniazid-resistant organisms sometimes fail to produce tuberculosis in guinea pigs on inoculation. However, these same organisms will produce tuberculosis in mice. The clinical significance of

this phenomenon remains to be seen. Some of the country's best investigators in the bacteriology of tuberculosis are working for the answer to these new and engrossing problems. The picture is confusing, to say the least, and until further laboratory and clinical investigation produces unequivocal answers to these perplexing questions, the best interests of our tuberculosis control program will be served by our adhering to well established concepts of epidemiology and pathogenesis in continuing to attack the disease. The physician treating tuberculosis must assume that a patient spreading isoniazid-resistant tubercle bacilli is still a public health menace to his family and associates until definitely proved otherwise. With the evidence available at this time, any other attitude would be unjustified and dangerous. Certain it is that patients continue to die of tuberculosis every day in the United States, despite the use of isoniazid and other anti-microbial agents. Many others improve up to a point with chemotherapy, but are still doomed to chronic semi-invalidism because of residual cavities not amenable to surgery. The management of tuberculosis is a long term affair, and the results of any particular therapeutic regimen cannot be properly evaluated until a goodly number of similar cases have been followed for at least several years.

WHEN IS HOME TREATMENT ADVISABLE?

In those communities having insufficient sanitarium beds, the physician is often asked, "Can't I get well at home?" Certainly some patients can be successfully treated at home. But a number of different factors must be carefully considered when one undertakes to decide whether a patient can and probably will do well on home treatment, or whether he should have sanitarium care. Each such case must be decided on its own merits. It is among the minimal and moderately advanced cases that home treatment is most likely to be successful. This is not to say, however, that all early cases can be treated at home. The selection of cases for home treatment should be made only after consultation has been secured with a physician who is trained and experienced in the management of tuberculosis. In general, patients with advanced tuberculosis should have the benefit of sanitarium care. The extent and type of the disease process are, of course, most important considerations.

Other important questions must be answered in the affirmative if home care is to be successful. Is the patient cooperative? Will he discipline himself to follow the prescribed rest regimen at home for as long as may be necessary? Will the patient have a room for himself? Are the home facilities adequate for his taking the cure? Is someone available to give the patient proper nursing care? Do the facilities at home permit carrying out prop-

er isolation technic to prevent spread of infection? Will the family cooperate intelligently in carrying out these measures?

If there are children at home, the difficulties are greatly accentuated, and home care can seldom be recommended.

PRE-SANITARIUM CARE

Not infrequently, the family physician may encounter a patient who requires sanitarium care, but for whom no bed is immediately available. In such a case, consultation with the sanitarium physician will determine which chemotherapeutic regimen should be instituted at home while the patient is awaiting admission. This is obviously a temporary or "stop-gap" measure, but in this way the patient has the benefit of starting on a planned long term chemotherapeutic regimen which can be continued after he enters the sanitarium. In most cases, it is imperative that the patient be impressed with the fact that this pre-sanitarium regimen is only a temporary measure, preparatory to his admission to the sanitarium. Otherwise, when his symptoms subside and he feels better, he may refuse sanitarium care when a bed is available. Such occurrences are not uncommon, and the end results may be disastrous. So here again, the patient-physician relationship is all important.

POST-SANITARIUM CARE

The family physician can and should play a helpful and significant role in the post-sanitarium management of the patient by coordinating his efforts with those of the sanitarium physician. In many sanitariums the patients' stay is shortened by discharging them earlier than in the past to continue their chemotherapy at home. In such cases, the family physician is often the logical one to carry out the post-sanitarium management. He does this by cooperating with the sanitarium staff in carrying out the recommended post-sanitarium management. This includes supervising the regimen of chemotherapy and exercise prescribed by the sanitarium, getting periodic X-rays of the patient's chest, and obtaining sputum examinations and gastric cultures as indicated. In most cases, a chest film is indicated at intervals of two to three months during the first year of post-sanitarium observation; every four months during the second and third years; and every six months thereafter for the next several years. Afterward, the patient should have repeat chest films at least once a year, indefinitely. By close cooperation with the sanitarium, the family physician not only serves the best interests of the patient with respect to his tuberculosis, but in addition maintains the splendid personal physician-patient relationship which is so desirable and so important. The relations between the pri-

vate physician and the sanitarium can and should be most cordial and mutually beneficial.

It cannot be emphasized too strongly that tuberculosis is a chronic and treacherous disease that is prone to relapse. If good end results are to be obtained, there must be intelligent long term management and observation of each case. This, of course, requires implicit confidence of the patient in his physician. This physician-patient relationship is a precious thing and is the *sine qua non* of the successful management of tuberculosis.

SUMMARY

Since the advent of effective anti-microbial therapy for tuberculosis in recent years, the private physician's role in the control of tuberculosis has become greater, rather than less. The private physician—particularly the family physician—

should be willing and able to accept this responsibility.

The different anti-microbial regimens currently in use are evaluated. Methods are discussed by which the family physician can play his role more effectively in tuberculosis case finding. The need for close cooperation between the private physician and the sanitarium is stressed. The advantages of sanitarium treatment for the great majority of tuberculosis patients are emphasized. While it is recognized that there are some patients who do not require sanitarium care, the proportion of such cases is usually small. The dangers and pitfalls of home treatment are pointed out. Criteria are recommended by which certain cases can be selected for satisfactory treatment at home. The family physician's part in the post-sanitarium care and observation of the patient is also discussed.

Cerebral Palsy and Brain Damage in Pediatric Practice

ROBERT E. BRUNER, M.D.

KANSAS CITY, MISSOURI

IN 1945, WHEN I limited my work to the field of cerebral palsy, I was not yet aware that it is impossible to work effectively in that area without giving consideration to the entire field of brain damage. But I have since become convinced that approximately 50 per cent of the patients who have difficulty in muscle control as a result of faulty development of, or damage to, the brain (and that seems to me a fair working definition of cerebral palsy) have additional symptoms of brain damage. Those symptoms must be understood and managed or treated as best we can if we are to be of maximum help to those who come to us. They may include, in varying degrees, blindness, deafness, convulsive disorders, disturbed behavior, mental retardation or defection, perceptual damage and other difficulties. They may occur in any type of cerebral palsy, often in so minor a way as to be difficult of detection, and in greatly variable ways. I feel, therefore, that it is impossible to do justice to the responsibility of the physician in such cases without serious consideration of both types of problems in each individual who is presented. Therefore, a properly comprehensive and constructive presentation must necessarily concern cerebral palsy and brain damage coupled as an entity.

RESPONSIBILITY TO THE CHILD

As respects the pediatrician's responsibility in the clinical management of the child, I should like

to state that cerebral palsy is neurological in diagnosis, pediatric in early care, and primarily orthopedic only when the child has been untreated or mistreated. Thus, it seems to me that if early diagnosis is made as it should be, the pediatrician is the one who has the responsibility of setting the stage for effective handling of the problem. And it is very important that the initial steps in such handling be constructive ones. Aside from the problem of guiding and counseling the parents, there are many important things to be done in respect to the child's own problems. Thus, it is essential that the family physician have a certain basic understanding of cerebral palsy in order to do justice to the situation when it is presented.

Even though the child may be no more than a few months old, the time to start treatment is when the condition is first suspected. And I certainly feel that cerebral palsy and brain damage should be suspected whenever development is slow. This principle should always apply when there is no other obvious cause, and even though there is another condition that may account for the slowness of development, the possibility of concurrent cerebral palsy should be ruled out only after time and work.

There is too much tendency to "wait and see" what the child will do, when positive action should be taken instead. I am very often asked just what there is to do for such a child who is less than a year of age. First of all, I may say that it is of

utmost importance that the child be provided with an opportunity to learn, or to try to learn, various necessary activities at the age he would normally have had such an opportunity. He should, in so far as is practicable, have the same experiences as he would normally have had at any given age. Remember that these children improve only by practice. Our job is to see that they get as much proper *practice* as we can. Often medical and other management is a means of removing retarding factors or stimulating others so that such practice results.

Control of seizures as soon as possible is, to me, of the greatest significance in relation to the principle that I have just discussed. Through work in this field, it is now being established that the earlier the undamaged brain areas are brought into full function, the greater likelihood there is that they will take over the functions which the damaged area would normally have controlled. It is, of course, a definite fact that most types of seizures are retarding, especially in brain damaged children. When frequent seizures are controlled, the response in many of these children is often dramatic.

A great many anticonvulsant drugs are useful. We all have our favorites. But in an effort to gain complete seizure control, we should exhaust all possibilities early. All unusual behavior in such children should be considered as seizure equivalents until proved otherwise. A therapeutic test is perhaps the best available method for determining whether or not they are, and at the same time, of securing improvement. Children tolerate relatively large doses of drugs. To get a therapeutic effect, I find it necessary in this field, in particular, to administer large doses of anticonvulsants and relaxants. Often combinations of anticonvulsants are effective where single drugs fail. Redistribution throughout the 24 hour period is often necessary where the largest tolerated dose given at regular intervals is ineffective. Additional amounts should be administered at times of stress, such as with constipation, illness without fever, febrile illness, fatigue and excitement. And on this basis, the amounts should be adjusted by the family between visits as needed.

Elimination of constipation by diet, physical activity and measures such as laxatives is important for its own value in the nursing problems of the child, and in the younger child even more so if convulsions are present, for constipation predisposes patients to them.

Early establishment of good disciplinary habits in sleeping, feeding, toilet training and behavior will have great value in the development of nursing care routines that are best for the family's welfare. It is even more important for the establishing of self-discipline in the child—a quality important to all of us in our success in life, but particularly to the handicapped child who must develop a greater self-discipline than the

average if he is to succeed. When the situation requires, a properly applied switching on the bare legs is often the best medicine we have to offer.

Physical therapy can be given to advantage as early as six months. It gives a mother something constructive to do. It gives the child some effective activity and helps him to establish reciprocal motions. It can be given effectively this early by utilizing musical rhymes to condition a response, whereas without this approach no response may be noted in the child for a great many months. The family can be taught a program of variable postural activities which, at this early age, can rather easily prevent deformities that would be much more difficult to correct later. These include deformity of the head from lying too much in one position, external rotation of hips from too much supine lying and little or no sitting in a proper chair-and-table combination, external rotation of the legs from the use of bulky diapers, foot drop resulting in tightness of heel cords, dislocation of hips, curvature of the spine, wrist flexion deformities and flexion contractures of the fingers and thumb. Many, or even all, of these can in many cases be prevented by simple, common sense activity.

In general, there has been a tendency to use too much sedation for the young, irritable handicapped child. In a number of cases it actually makes for more irritability, for it dulls the child and prevents him from reacting to and profiting from his environment. Sedation often constipates the youngster, and constipation tends, in turn, to precipitate seizures. I have seen the stopping of phenobarbital result in growth of personality and in reduction of frequency and severity of seizures. It may be better to use relaxants for problems of sleep and irritability, and anticonvulsants that are less sedative in effect. We have been disappointed in the effectiveness of many of the relaxants. However, Prostigmin, Tolserol and Artane have proved very useful in many cases of irritability and poor sleep in the young child, especially where much tension or rigidity is present. Dilantin or Mesantoin may be more effective anticonvulsants in such cases. In my experience of over four years, Gemonil, although related to phenobarbital, has proved much less constipating and dulling, and is high on my list for such purposes.

Stopping the bottle, and feeding the child table foods as soon as possible after six months are of major importance. Several things are accomplished by these means. Early development of effective chewing and swallowing is hastened. Tongue motions can be controlled earlier, and drooling improved, both of which are factors important in the development of speech. Whenever it is possible to go right to adult table foods, time spent in giving baby and infant food preparations is *time wasted*. Furthermore, development of more nearly adult feeding habits, increased

activity through physical therapy routines and use of proper apparatus to develop effective postural control, and general practice, in addition to getting the child away from infantile habits that handicap him, contribute materially to the elimination of constipation and its undesirable side effects. When needed, large amounts of stewed fruits, sugar, whole wheat cereals and vitamin B-complex may solve this problem. In my experience, Neocultol in amounts of two to six teaspoonfuls at bedtime has proved to be the most effective laxative in stubborn cases. Prostigmin, given up to six tablets daily, has been effective in several recalcitrant cases.

Toilet training should be started early, and the same methods should be used as with any other child, except that special toilet seats to provide security and relaxation are needed. These children will often train as early as the average child, and what a help it is to both mother and child when effective routines are developed!

Slow dentition, a very real problem in many brain damaged children, and often a factor predisposing them to seizures, can be helped materially by early institution of solid foods and by teaching the mother to massage the gums frequently with a washcloth. This helps cut the teeth through the gums by providing some of the friction that the average child gets by ordinary means.

Tincture of belladonna, 5 to 40 drops three times daily, has been effective in controlling drooling in many hundreds of infants and children.

These children, in many cases, are seen too infrequently by their family physician or pediatrician. Frequent visits are needed if the doctor is to keep pace with the changing picture. Every two or three months is far better than the "Come back in about a year," that one frequently hears.

Treat such children, from the general medical viewpoint, like any other children. They are, first of all, little boys and girls. Secondarily, they are handicapped. They have the same health problems, in the main, as other children, and respond to much the same treatment. Most of the things about them are normal. You will find it necessary to take more time than usual for effective examinations and for reaching definite conclusions. Specific differences are noted in the field of convulsions, in nutrition and feeding, constipation and toilet control, in dentition, in problems of mucus in the nose and throat, and in the frequency of pneumonias, which seem to be the chief intercurrent cause of death.

As respects mentality, hearing, vision, speech, ambulation and independence, do not attempt to prognosticate until the child is older. The only dependable method for finding answers to such questions is to place the child on a program with which you are familiar and then to observe his rate and pattern of progress over a period of time.

Last in the responsibilities of the pediatrician to the child, I would suggest that it would be wise to utilize special facilities for diagnosis and treatment, where they are available. Doing so can save much of the wasted time, effort and money for which this field is notorious, for parents have a tendency to feel that they do not have an adequately effective program, and they may otherwise have an inclination to shop around.

Teamwork with specialists, special facilities and consultants is necessary for good results.

I have had many favorable comments about, and requests for reprints of, an article of mine on the training of the cerebral palsied at home that was published in the *CRIPPLED CHILD* magazine in 1947¹ and a similar one in the *CEREBRAL PALSY REVIEW*.² This interest points up the fact that there is a great and continuing need for this approach. However, even this help will not be available unless you, I or someone else becomes interested enough in helping each family to develop such home programs, learns to plan it and then applies that knowledge.

Keats, in his article on rehabilitation of the child with cerebral palsy in the *JOURNAL OF THE INTERNATIONAL COLLEGE OF SURGEONS*,³ has said, "The responsibility for the neglect of the child with cerebral palsy rests firmly on the uninterested practitioner." I believe that to be true.

RESPONSIBILITY TO THE FAMILY

As respects the pediatrician's responsibility to the family, there are not the myriad details of his responsibility to the child, but there are several points of great significance. First of all, it is far better to risk the displeasure of parents by suggesting the probability of brain damage and/or cerebral palsy when development is slow, and to be wrong, than it is to wait before making such a suggestion and then suffer their inevitable criticism for not having done so when it becomes plain that the child is handicapped. Remember that it is human nature to place the blame for misfortune, and parents pounce on the first error of commission or omission that becomes apparent to them.

Keep in mind that a young mother with a handicapped child desperately needs help. Be sure you give her the best you can. She needs explanation, and time—time to ask the many questions that arise. She must be answered by someone. Answer her questions if you are able; if not, refer her to someone who can.

Put the cards on the table as you see them; but don't be cruel. You will hurt the family, yourself and the medical profession if you are brutally frank. Just be frank. Leave the door open to all possibilities. Leave a hope, when one is at all justified, and while you are finding out whether or not progress can be expected from your therapeutic regimen, counsel the family frequently

and constructively so that it will be able to accept the situation properly. The father, mother and other interested relatives will see things your way if your advice and assistance are concurrent.

Again, may I say it is difficult to prognosticate early, as regards mentality, vision, hearing, seizures, physical independence and educability. DON'T!

Each child is a little boy or girl. Parents are fathers and mothers, and they are human. Each child can be helped to some extent, in some way that is worthwhile. Never say that there is nothing to do. The child, his family and his community can be helped by your proper attitude and efforts. Guide the family to needed help if you cannot give it yourself. Find where such help is and how to make it available to the family.⁴

Where institutionalization is indicated, there are good methods for developing the proper attitude and cooperation of the family in planning for it. Those methods are seldom used, but you can learn them and utilize them well. I should like to quote from an article by Dr. Milton Sarsnik, of the Temple University School of Medicine, published in *MEDICAL CLINICS OF NORTH AMERICA* and entitled "Developmental Appraisal by the General Practitioner":⁵ "The mode of talking to parents concerning the future of a retarded child requires individual adaptation for each set of parents—it is an art. The problem usually need not be hurried. It is generally agreed that the indications for placement are not totally dependent on the child's numerical intelligence quotient; more important is whether placement best satisfies the needs of a particular family and child."

Those are words of wisdom.

RESPONSIBILITY TO THE PROFESSION AND TO THE COMMUNITY

The pediatrician's responsibility to the medical profession and to the community shares equal importance with his responsibility to the family and to the child.⁶ We are faced with a major change in medical practice. Most of our medical personnel and of our medical facilities have been geared to the consideration of acute medical and surgical problems. But major emphasis is shifting to the problems of chronic conditions. A drastic change will have to occur as we meet this challenge. Cerebral palsied and brain damaged children are one of the many groups of chronic patients in question.

I was pleased to note the importance attached to this problem by Dr. Louis Bauer, president of the American Medical Association, in his President's Page of the *JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION* for May 30, 1953.⁷ He there reiterated the 14 points of our medical care system most in need of attention, which he first set forth in an address he delivered in December, 1952. At the head of the list, he placed programs

for the care of those suffering from chronic and degenerative diseases.

I should like to feel that much of the problem of cerebral palsy might be eliminated by prevention through developments in research. I believe, however, that many of the causes are such that we cannot eliminate them. Those concerned with birth injury may be decreased. Rh sensitivity may be a lesser factor in the future. The many thousands of cases resulting from encephalitis as a complication of contagious and other conditions in infancy and childhood may be lessened. But the large number of congenital cases pose a greater challenge to effective prevention. The recently determined fact that cerebral palsy is six times as common in cesarean sections as in so-called normal birth poses yet another challenge. It seems likely that we shall have these conditions with us in substantial numbers over the years and that Dr. Bauer's hopes will of necessity become actualities.

Preparation to cope with such conditions is not being given in our medical school training at this time. Physicians must learn to manage such things by securing postgraduate training of some sort. Reading, discussing such problems with those experienced in the field, visiting centers active in such work and taking special courses are among the methods of securing such knowledge.

Your responsibilities as a citizen as well as your responsibilities as a physician make it necessary for you to learn how to manage such problems for the welfare of all concerned. It is to be hoped that our medical schools will soon include in their curricula some methods of training their students in the problems of medical economics and doctor-patient relationships in general, and that they will specifically train them to be at least minimally capable of coping with the problems of the chronically handicapped, including the cerebral palsied.

The report of the Interstate and Foreign Commerce Committee of the House of Representatives, on Medical Research,⁸ based partly on information from leading physicians, states: "The effect of modern medical knowledge is dissipated by public ignorance and indifference. Social prejudice is another factor. Although 80 per cent of all epileptic seizures can be wholly or partially controlled, only 20 per cent of the patients receive adequate treatment, primarily for reasons of ignorance and prejudice. New emphasis must be placed on efforts to translate knowledge into improved medical and public health practice. To this end, the private physician plays a large role because he is in an excellent position to influence his patients with respect to their health practices."

The adverse reaction of families of many such children to the attention they have had from many members of the medical profession repre-

sents the worst kind of public relations. It is only when all physicians learn how to be of effective help in such cases, and then practice what they have learned, that good public relations will be developed and maintained.

POTENTIALS

I shall mention a few of the pertinent factors in respect to the potentials in this field of endeavor. First, a family with a problem such as cerebral palsy, as it is given proper help and as it learns to cope with its difficulty efficiently, becomes a more effective unit of society in the community and a better group of citizens.

Education, as such, is our goal for such of the handicapped children as may profit from it. Training, so as to get the most practicable improvement in each case, is our goal for all. Early group training is the best program for most of these cases. Where such is not available, the next best program is out-patient evaluation and instruction of the family in an effective home program. Both are available at various centers in Iowa, including the Cerebral Palsy Center in Des Moines, sponsored by the Iowa Society for Crippled Children and the Kiwanis. Consultation in all related fields rounds out the program there, except where intensive evaluation and in-patient routines are needed. Such are available at the Hospital School for Severely Handicapped Children in Iowa City, where other services can also be secured.

Eighty per cent of convulsive disorders can be controlled, if we try.

Fifty per cent of cerebral palsied and brain damaged children probably have some degree of mental defect. Nevertheless, many of them can be helped a great deal, and they must be helped in their homes. Even if we chose to institutionalize all or most of those who are defective in some degree, where would we do it? Our facilities for such a purpose are already overflowing.

A complete program includes expert diagnosis, with consultation in many fields, when needed. Electroencephalography and pneumoencephalography may be of help. Arteriograms and myelograms may be required. Visual and auditory acuity testing is often required, but early findings are not dependable. Physical, occupational and speech therapy are needed. Apparatus and bracing facilities can be utilized. Psychological evaluation and psychiatric help can be used. Special education, special nursing routines and parent counseling are often required. In particular, medical supervision in follow up includes consultation in neurosurgery, psychiatry and pediatrics, and in orthopedic surgery, ophthalmology and otolaryngology where indicated. And often other fields of medicine or dentistry and allied fields are sources of help.

Research promises much for this field, and it is being widely developed. Etiology is as yet uncer-

tain in many cases. Perhaps a third or more cases are congenital, one third occur as a result of birth-related problems, and one third are the result of postnatal injury or disease. Prematurity, Rh sensitivity, breech presentation, difficult labor, cesarean section and the encephalitis that accompanies many childhood contagious diseases are most notable in their relation to cerebral palsy. Because I am seeing many cases of the deaf athetoid type of cerebral palsy who have had replacement transfusion soon after birth, it is clear to me that we haven't yet mastered the Rh problem. New advances in brain surgery—notably the types of hemispherectomy or partial ablation, particularly in unilateral brain damage—offer hope of further advances.

Since my earliest work in this field, I have been particularly impressed by the significance of handedness (or laterality) and cerebral dominance, and their relation to mental development, emotional control, seizures and general progress. Since my early training with Dr. Phelps in these principles, I have attempted to extend them even further in the field of brain damage and to do more for these cases. I have found that undesirable symptoms are often produced by the use or training of the crippled arm and hand in the hemiplegic and of the more handicapped hand in some quadriplegics, above the amount that the child below six or seven years of age will spontaneously use it. These manifest themselves first in the form of negativism, stubbornness, restlessness in sleep, temper tantrums and, eventually, seizures. Restraining this arm and hand in many cases has minimized the use of the more damaged area of the brain and lessened these symptoms of cerebral irritability. It followed that if such improvement could follow from this temporary type of measure, surgical removal of the damaged or noxious tissue might allow the remaining undamaged portions of the brain to function at their natural level, with the possibility of effective improvement as a result. For some years I have endeavored, with little success, to interest neurosurgeons in the feasibility of such surgical procedures. You can therefore realize my satisfaction with recent reports appearing in the medical literature relating to the apparent effectiveness of such procedures in this and other countries. Such work has been done by Krynauf,⁹ in France, by MacKay¹⁰ and Johnson,¹¹ in the United States, and by Beller and Streifler,¹² in Jerusalem.

These procedures and the pleasing reports of results achieved through their use give hope of much progress in this special method of treatment and of valuable gains in our knowledge of the brain that may be used in many fields.

Organizations are becoming interested in this problem at local and national levels, in lay and in professional fields. There is now an American Academy for Cerebral Palsy. Progress is being

made. You as pediatricians and as family physicians are in position to apply it.

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Simplifying Technics and Avoiding Complications in Cataract Extractions

JUSTIN M. DONEGAN, M.D.*

CHICAGO, ILLINOIS

IN VIEW OF THE GREAT number of procedures for extraction of the cataractous lens that have been described, one hesitates to suggest another. In fact, no attempt will be made here to present a new or original method. Rather, a relatively simple combination of technics will be presented—one which can readily be carried out with little or no trained assistance, and which, in our experience, has yielded a high percentage of successes with relatively few complications.

Throughout the improvement of methods for prophylaxis against infection, akinesia, delivery of the lens and closure of the wound, the incidence of complications has steadily decreased, but the study of a series of cataract extractions always reveals some instances of common mishaps, such as vitreous loss, iris prolapse, hyphema, infection, flat chamber, iridocyclitis, glaucoma, epithelization of the anterior chamber, keratopathy and retinal detachment. It would appear that the methods of cataract extraction here described compare favorably with similar reports in the recent literature as regards the frequency of these complications.

TECHNIC OF OPERATION

Prior to surgery, each patient has a thorough general medical checkup, and every possible precaution is taken to eliminate or control hypertension, diabetes, prostatic hypertrophy, foci of infection, etc. In addition, infection in the conjunctiva or lacrimal sac, when present, is eliminated by appropriate treatment. Even when there is no evidence of dacrocystitis, one should test the patency of the lacrimal drainage system by ir-

rigating through the punctum. If there is obstruction in the naso-lacrimal duct, it is safest to close the punctae temporarily by the application of cautery. Though the conjunctiva may appear perfectly healthy, it has been our practice to have the patient instill one of the less allergenic solutions, such as Sodium Sulamyd, in the eye three or four times daily for ten days before the cataract operation.

Atkinson¹ has called attention to the importance of careful psychological preparation of the patient for operation. A disturbed and apprehensive patient is much more likely to have complications than is one who approaches surgery in a good frame of mind. A few minutes spent in reassuring him that there will be very little if any pain associated with the operation and that he will not have to spend seven or ten days afterward lying flat in bed with his head encased in sand bags (as his friends and relatives may have led him to expect) will usually do much to relieve his fears.

Preanesthetic sedation is obtained by administering pentobarbital sodium (Nembutal) 0.1 Gm. (1½ gr.) an hour and a half before operation and a similar dose a half hour before operation. Smaller doses are prescribed for elderly or debilitated patients, and if the desired sedation has not been obtained by the time the patient reaches the operating room, 0.5 gr. of codeine is given by hypodermic injection. A test dose of pentobarbital sodium is always given the evening before the operation.

Local anesthesia is obtained by instilling 0.5 per cent pontocaine or 4 per cent cocaine, and akinesia is produced by an injection, after the method of

* From the Presbyterian Hospital.

Van Lint, of procaine 2 per cent, containing 5 minims of epinephrine 1:1000 and 150 turbidity reducing units of hyaluronidase per ounce. Retrobulbar injection of 1 to 1.5 cc. of this solution is now routinely performed. Several minims of this mixture are injected subconjunctivally over the insertion of the superior rectus muscle and adjacent to the limbus at the "6 o'clock" position. The lids are retracted by means of the Park-Guyton Speculum, and, if indicated, a lateral canthotomy is performed. A bridle suture is placed just beneath the insertion of the superior rectus muscle.

Eighty-five per cent of the operations in the present series were performed with fornix-based flaps, and the remainder were done with limbus-based flaps. The fornix-based flap is much easier to prepare and allows for a clearer view of the limbal area, thus simplifying the section and insertion of the sutures. It is important to incise the conjunctiva as far forward as possible on the cornea and to leave behind no tags of conjunctiva attached to the cornea. The conjunctival flap is dissected upward for six or seven millimeters in the upper half of the circumference of the globe.

The keratome is inserted at the bared limbus at "12 o'clock," and an incision about 4 mm. long is completed. Corneal scissors are inserted, and an approximately 1 mm. extension of the incision is obtained temporally and nasally. The corneal edge of the wound is then grasped with a small forceps near the nasal end of the incision, and one needle (Greishaber corneal needles are excellent for this purpose) of a double armed 6-0 black silk suture is passed through the outer layers of the cornea and then through the same level of the scleral wound lip. The suture is pulled through to approximately one half its length, and the same needle is carried through the conjunctival flap about 3 mm. behind its cut edge. The other needle of the double armed suture is passed through the conjunctival flap immediately next to the first. A similar suture is placed near the temporal end of the incision and is carried through the conjunctival flap in the same manner. The sutures are picked out of the wound with either a blunted small iris hook or a "pick" and are looped away from the wound.

After this small section has been made, the placing of the sutures is relatively easy, and since the incision is only 5 to 6 mm. in extent when the sutures are placed, and since the sutures are inserted very near the extremities of the wound, a fairly close approximation of the original anatomical relationship of the apposing corneal and scleral lips can be obtained. Dunnington and Regan² have shown that sutures too deeply placed may cause epithelial invasion of the anterior chamber, fistulization, iris incarceration or prolapse, and hemorrhage into the anterior chamber. It

would seem wise not to insert a corneoscleral suture to a depth greater than one half the depth of the incision.

With either the straight or the curved Castroviejo corneal scissors, the section is enlarged to the "three o'clock" and "nine o'clock" meridians. A peripheral iridectomy was performed in the great majority of the cases in the present series, but a complete iridectomy is indicated wherever there is a rigid, non-dilatable pupil. The round pupil, in addition to having an attractive cosmetic effect, may aid in the prevention of vitreous prolapse.

In cases of taut capsules, we have employed the Bell erisophake, but in most instances the Arruga forceps (as manufactured by Greishaber) has been the instrument of choice. The anterior capsule is grasped well below the anterior pole of the lens, and the lower pole of the lens is tilted upward, thus stretching the Zonular membrane taut. The tip of the muscle hook is then applied to produce pressure through the cornea at the limbal ring at "12 o'clock," and is carried for a short distance to either side, thus producing a beginning separation of the Zonular lamella. According to Vail,³ one should exert the pressure backward, in a stripping fashion, to avoid excessive pull on the region of the ora serrata, which usually has undergone cystoid degeneration in the age group in which cataract is most frequently found. After the lower edge of the lens is seen to come forward, the continued pressure below tends to tuck the cornea under the tumbling lens. This tucking of the cornea continues until the lens is delivered, and, as Vail³ has stated, "Its action is, first, to assist in peeling off the Zonular membrane, and, second, to prevent the vitreous from coming forward below the lower edge of the advancing lens." As the inferior pole is tumbled through the wound lips, it usually helps the completion of the extraction to rotate the lens to one side by a gentle pull with the forceps.

Following delivery of the lens, the sutures are pulled down loosely, and the iris is gently stroked out of the wound lips and repositioned. The wound lips are carefully inspected, so that one can be sure that no tissue lies between them, and while the conjunctival flap is stretched down over the anterior corneal surface, one ties the sutures firmly, being careful not to make them so tight as to cause any wrinkling of the adjacent cornea. The iris repositor may again be inserted and the iris swept inward if there is any unevenness of the pupil. After a final inspection of the wound lips, the temporal and nasal wings of the conjunctival flap are closed with 6-0 black silk sutures.

At this point, a mixture of 100,000 units of penicillin G and 10,000 micrograms of streptomycin, making a total volume of 0.25 cc., is injected under the inferior nasal bulbar conjunctiva. If

the extraction has been intracapsular, a drop of 1 per cent pilocarpine is instilled, but if extracapsular, 1 per cent atropine is used.

Both eyes are usually bandaged for 24 hours, and then the eye is first dressed. Usually at this time the badage is removed from the unoperated eye. The patient's position in bed for the first 24 hours is only semi-reclining or sitting, and he is usually up and about on the third or fourth day.

RESULTS

The present series consists of 300 consecutive cases in which a senile cataract was extracted by the technics described. Omitted from the series are all instances of congenital and traumatic cataract and all cases in which other technics, such as no conjunctival flap, Stallard or Verhoeff sutures, sliding technics of delivery, etc., were employed. The majority of these operations were done by members of the resident staff, who in many instances were just beginning their training in ophthalmic surgery.

The variations of the technics described are presented in Table 1. In the last 84 such operations, hyaluronidase was employed in the retrobulbar injection, and it has been our clinical impression that much softer eyes were produced by this means. This is too small a number to be statistically significant, but the incidence of vitreous loss was only 1.2 per cent in this group, as compared with 4.6 per cent in the 216 operations in which only procaine and adrenalin were used in the retrobulbar injection.

TABLE I
VARIATIONS IN TECHNIC

	Number	Percentage
Hyaluronidase included in Retrobulbar	84	28
Fornix based Flap	256	85
Limbus based Flap	44	15
Post placed Sutures	252	84
Pre-placed Sutures	48	16
Keratome Scissors	286	95
Knife Scissors	14	5
Peripheral iridectomy	276	92
Full iridectomy	24	8
Capsule Forceps	257	86
Erisophake	43	14
Intracapsular	229	76
Extracapsular	71	24

Although the number of cases (44) in which a limbus-based flap and pre-placed sutures were employed is too few for comparison, it is interesting to note that complications which might be related to the type of flap and the sutures, such as hyphema, iris prolapse, and flat chamber, occurred in a much higher percentage in this group than in the series done with fornix-based flaps and post-placed sutures. However, the one instance of epithelialization of the anterior chamber in these 300 operations followed the use of a fornix-based flap and post-placed sutures.

Unintentional rupture of the lens capsule occurred in 24 per cent of the entire series of cases, and although the erisophake was employed in only 43 cases, broken capsules resulted in only 4.6 per cent when this instrument was used. The unintentional rupture of the capsule was accompanied by vitreous loss in 7 per cent, whereas vitreous loss happened in intracapsular extraction in only 3.9 per cent of the cases. All three cases of persistent postoperative iridocyclitis in the entire series following unintentional extracapsular operation. Needling had to be performed in 16 of the 71 eyes in which the capsule had ruptured.

The various complications which occurred in the 300 cataract extractions included in this report are listed in Table 2. The percentage of these complications can be favorably compared with similar reports in the literature.

TABLE II
COMPLICATIONS

	Number	Percentage
Vitreous loss	14	4.6
Hyphema	3	1.3
Iris prolapse	5	1.6
Infection	1	.3
Flat chamber	8	2.6
Iridocyclitis	3	1.0
Glaucoma	7	2.3
Epithelial downgrowth	1	.3
Bullous Keratopathy	2	.6
Retinal detachment	2	.6

CONCLUSIONS

A method of cataract extraction which is relatively easy for even inexperienced operators to perform has been presented. Each portion of the technic has been described, and the occurrence of complications in a series of 300 operations performed in this manner has been tabulated.

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OB. & GYNEC. BOARDS

The next scheduled examination (Part I) and review of case histories for all candidates for the diplomas of the American Board of Obstetrics and Gynecology will be held in various cities on Friday, February 4, 1955. Case abstracts numbering 20 are to be sent by the candidate to the Secretary, Robert L. Faulkner, M.D., 2105 Adelbert Road, Cleveland 6, as soon as possible after receipt of notification of eligibility for the Part I written examination.

State University of Iowa College of Medicine

Clinical Pathologic Conference

April, 7 1954

SUMMARY OF CLINICAL FINDINGS:

THE 16-MONTH-OLD MALE under consideration was thought to be in perfect health until three months prior to his admission to this hospital on August 8, 1950. He then had an onset of fever, loss of appetite, general malaise and a persistent non-productive cough. The family physician made the diagnosis of a respiratory tract infection, and penicillin was given on several occasions.

Ten days prior to admission to this hospital, the symptoms of disease became more severe, and he was admitted to the local hospital. The child's course in the hospital was unfavorable, as evidenced by progressive lethargy, minimal persistent convulsions, increasing appearance of rigidity and vomiting. During this period, he received chloramphenicol therapy. On the day before his admission to this hospital, a spinal puncture was done. The examination of the spinal fluid showed 424 cells, of which 74 per cent were lymphocytes and 26 per cent were polymorphonuclear cells.

At the time of admission to this hospital, the patient was comatose. He was dehydrated and lying in the opisthotonos position. Generalized rigidity of the extremities was present. When a repeat spinal puncture was done, the cell count was similar to that reported in the examination prior to admission. The spinal fluid protein was 39 mg. per cent; the chlorides 547 mg. per cent; and the sugar 21 mg. per cent.

A chest film revealed "pneumonia in the left mid-lung field, with some evidence of atelectasis." The roentgenogram of the skull showed "prominent sutures, but no evidence of separation."

The child was skin tested with 0.1 cc. of No. 1 PPD.

During the first four weeks his general clinical appearance seemed to progress unfavorably. He remained comatose. He had a daily fever of 105°F to 106°F, and he remained in severe opisthotonos. The only improvement noted was a slight increase in spinal fluid sugar.

The fever decreased during the sixth week to a near-normal level, but the clinical signs suggesting the persistence of basal adhesions did not improve.

On February 5, 1951, the patient was presented to a medical-surgical conference in the College of Medicine as an example of unfavorable response to therapy.

The results of the examination of the spinal

fluid obtained at the time of dismissal were within normal limits. Because the laboratory findings had improved, it was impossible to state that there was no chance for improvement. The child was sent home for a period of custodial care. It was necessary that he be fed by gastric gavage. It was anticipated that institutionalization would be necessary.

The child returned to the Pediatric Out-Clinic April 22, 1951, for a series of follow-up examinations. On that day he followed light with his eyes, he said "Mama" and "Daddy," and he could grasp offered objects, but he was unable to sit up.

On September 11, 1951, he could sit up with support, and could pull himself to a standing position. His speech was increasing. On the twenty-first of the same month he could walk with an unsteady gait and seemed more alert. His speech was approaching that normally to be expected of a child his age. On the thirtieth, the residual physical findings were those related to vestibular dysfunction. He was then described as "talking a great deal."

On March 16, 1953, minimal instability in his gait persisted. A psychometric examination was done, showing him to have a mental age of 2 years, 2 months, indicating an IQ of 55. The Vineland Social Maturity Scale indicated his social quotient as 74.

The patient was readmitted to this hospital on May 11, 1953. Ten days afterward, he began complaining of pain and stiffness in his neck and back. During the three day period prior to admission, he had vomited frequently.

The physical examination at that time showed signs of vestibular dysfunction. In addition, minimal nuchal rigidity was described. A lumbar puncture was done. The spinal fluid protein was 8 mg. per cent; chlorides, 121 mg.; sugar, 63 mg. A guinea pig inoculation of spinal fluid showed no growth. The sedimentation rate was 11 mm. in 45 minutes. A chest film on May 12, 1953, was read as "healthy chest."

The child was afebrile and ambulatory, although he seemed irritable and complained of discomfort in his head.

After an uneventful day, May 16, 1953, the child was put to bed. He was described by the nurses as having been lethargic during the early part of the evening. Although no remarkable signs were noted during the evening, at 1:00 a.m. he was found dead.

CLINICAL DISCUSSION

Dr. Robert L. Jackson, Pediatrics: The patient for today's discussion was a 16-month-old child admitted to the Pediatric Service after being ill for at least three months. However, the child wasn't acutely ill until shortly prior to admission, at which time he developed definite evidence of central nervous system involvement. A lumbar puncture previous to admission showed an abnormal cell count. A tuberculin test was done after admission here, and it was strongly positive. Guinea pig inoculations with spinal fluid were done, and a definite diagnosis of tuberculous meningitis later was established. Immediately after admission, the child was given streptomycin, both intramuscularly and intraspinally. In addition, he was given Promizole. Isoniazid was not available at that time.

Figure 1 will give you an idea of the severity of the meningeal involvement by the severity of the opisthotonos that was present. At that time, Dr. Honor Smith, in England, was advocating PPD therapy and had reported very dramatic improvement of patients treated by that method. Dr. J. C. MacQueen, therefore, treated this child with PPD because the patient's condition was progressively deteriorating. He then showed considerable improvement. However, he still showed signs of severe involvement of the central nervous system at the time of his dismissal from the hospital. He returned for periodic examinations and showed considerable improvement. All signs of active infection subsided. There was some evidence of

vestibular involvement, but the hearing seemed to be normal. He was beginning to talk, but he definitely was somewhat retarded as far as formal psychometric examinations could indicate. Figure 2 shows him about two years later.

The child was readmitted to the hospital with symptoms of increased intracranial pressure, and at the time of his terminal illness he was being studied to determine whether infection had been reactivated. This patient was selected for presentation so as to provoke discussion of what can be done about adhesions and blocks which form at the base of the brain to obstruct the flow of spinal fluid.

Dr. MacQueen, who was to have presented this child this afternoon, requested Dr. Edith Lincoln, who, as most of you know, is one of the authorities in the field, to give her current opinion of therapy for preventing or overcoming blocks of cerebral spinal fluid. This is her opinion, as of February 1, 1954: "I haven't found anyone who has demonstrated the value of PPD by experimental work. I believe that Dr. Honor Smith's publications give the best information to date." She is continuing to use PPD routinely in all cases, however, and similar work is being done in Montreal. Very few people as yet have been able to duplicate her excellent results. We have seen partial obstruction lead to complete obstruction, with subsequent fatal outcome, but we also have seen partial blocks resolve spontaneously without PPD or enzyme therapy. We have not used surgery in our patients, to date. Sir Hugh Carrans, of Oxford,



Figure 1.

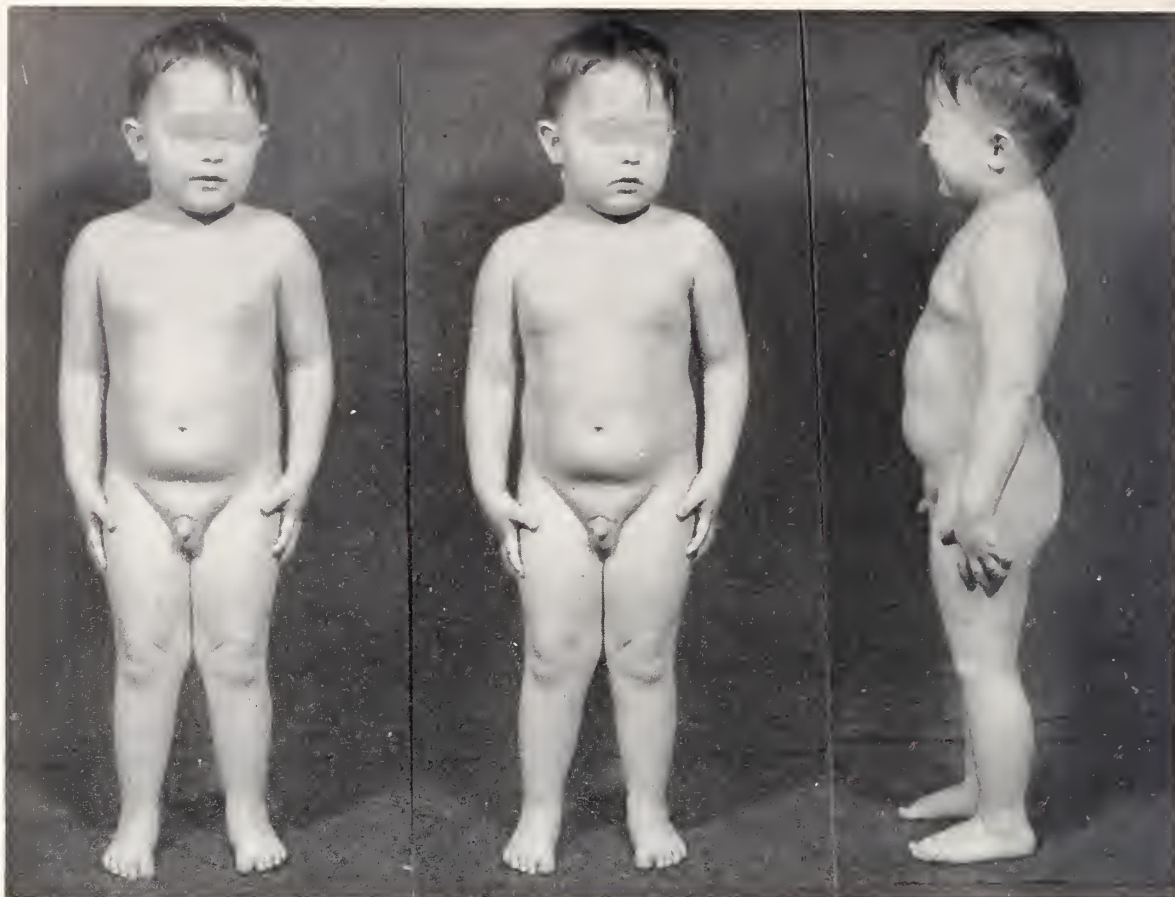


Figure 2.

published some interesting, but not very successful, results of surgical correction of obstructions. We have not used trypsin, one of the enzymes that has been employed elsewhere, because our pathologist is convinced that he has seen digestion of the brain substance following its use. We have been using dornase, developed from pancreas by Dr. Tillet, which can be given intrathecally or intravenously. We feel that this has been successful in eliminating obstruction in two cases of tuberculous meningitis. It is not yet commercially available, but we are encouraged by our results with it so far.

Now, I would like to ask Dr. Van Epps to discuss the films that were taken on this case.

Dr. Eugene Van Epps, Radiology: When this child was first brought to the X-ray Department, he was quite ill, rigid and opisthotonic. Only an AP short-distance film could be obtained. This demonstrated a pneumonic infiltration in the left upper lobe, associated with a segmental atelectasis. The two most common causes of segmental atelectasis in children are tuberculosis and fibrocystic disease of the pancreas. Nothing was seen on the original film to indicate the latter, and there was no evidence of foreign body, bronchiectasis or aspiration to account for the finding. At the

same examination, skull films were taken, and they showed no evidence of increased intracranial pressure, abnormal areas of calcification, or areas of bone destruction.

When a radiologist is confronted with a film of an infant's or child's chest showing an infiltration and segmental atelectasis, with increased spinal fluid pressure and signs of meningitis, he considers tuberculosis as the etiologic agent. But this impression must be conclusively established by other means.

Progress films of the chest were taken ten days later. Then there was evidence of hilar adenopathy in addition to the infiltration and segmental atelectasis involving the lingular division of the left upper lobe.

A film taken three years later revealed no evidence of infiltration, atelectasis or calcification. This is not unusual, since tuberculosis in infancy not infrequently heals completely without roentgen evidence of any residual findings, including calcification. Some small, dense shadows on the left in the hilar area represented pulmonary artery radicles seen end-on and did not represent calcification.

If time permits, I should like to mention a case of miliary tuberculosis in an infant six months

old with progression of the disease to form pneumatoceles, a localized tension pneumothorax, but without clinical evidence of meningitis. That child recovered completely, with no residuals demonstrable. She is well today, and one cannot detect any lesion within either lung.

Dr. Jackson: Dr. Perret, would you like to comment?

Dr. George Perret, Surgery: I think that from the study of this case report we could make a diagnosis of a meningeal infection, possibly tuberculous meningitis, because of the high lymphocyte count and the very low sugar level in the spinal fluid. I would like to make a drawing on the blackboard showing the spinal fluid circulation, especially in the extracerebral spaces. It may help us understand the formation of the pathologic lesion which caused the death of this baby.

In this section of the brain we recognize the frontal lobe, the parietal lobe, the occipital lobe, the pons, the medulla oblongata and the cerebellum. If we could see through it, we would see the lateral ventricles communicating with the third ventricle, then the aqueduct of Sylvius and the fourth ventricle. In the PA view, the fourth ventricle is diamond-shaped, and the spinal fluid escapes through the foramina of Luschka, situated in the two lateral corners, and the foramen of Magendie, located at the inferior corner. The spinal fluid then penetrates into the subarachnoid space and into the large cistern, the cisterna magna, which lies at the base of the cerebellum. From there, a portion of the spinal fluid escapes into the subarachnoid space along the spinal cord. Another portion of the spinal fluid escapes into the subarachnoid space beneath the medulla oblongata, beneath and around the pons, and into the large cistern situated beneath the base of the brain. This large basal cistern may be divided into its components, which are the pontine cistern, the interpeduncular cistern and the chiasmatic cistern. From these, the fluid circulates in the subarachnoid spaces over the various portions of the cerebral cortex, brain stem and midbrain. Some accumulates in other known cisterns, such as the cisterna ambiens situated between the quadrigeminal plate, the cerebellum and the uncinate gyri, the interhemispheric cistern located over the corpus callosum between the two cerebral hemispheres, and the cisterns located within the fissure of Sylvius. It is believed that the spinal fluid is finally absorbed into the venous circulation over both cerebral hemispheres.

In the case of an inflammatory or infectious process involving the meninges, and especially in the case of a purulent process, exudate may cover the meninges, filling the subarachnoid space. The exudate may travel with the cerebrospinal fluid. This explains the formation of adhesions anywhere along the circulation of the cerebrospinal fluid in the subarachnoid spaces. The basal cistern is one of the most common sites for the formation

of adhesions and for the accumulation of purulent exudate, which may completely block the subarachnoid fluid circulation around the pons, medulla oblongata and cerebral peduncles. Thus, the fluid will be unable to reach the hemispheres, and absorption may not take place. With such a complete blockage of the subarachnoid circulation, fluid will accumulate eventually in the ventricles and produce an internal hydrocephalus.

Depending upon the number of adhesions in the subarachnoid space between the ventricular system and the subarachnoid system, the hydrocephalus may be a communicating hydrocephalus if no adhesions are present, or a noncommunicating hydrocephalus if adhesions prevent the fluid from entering the subarachnoid spaces at all. In the presence of an internal hydrocephalus, whether it be communicating or noncommunicating, increased intracranial pressure will soon develop, and all the severe signs resulting from the increased pressure will be associated with it.

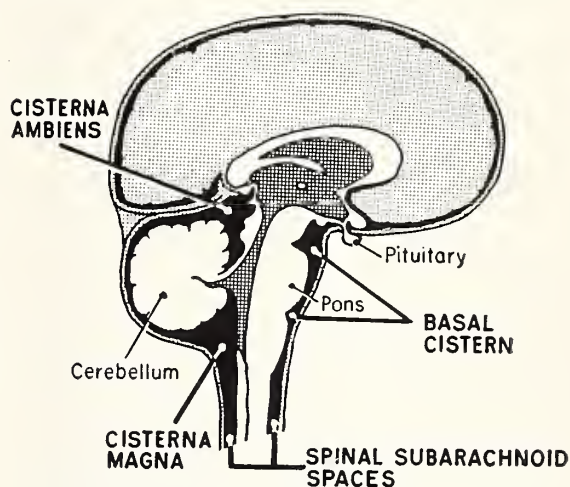


Figure 3.

Surgical treatment for decompressing the hydrocephalus consists of connecting the ventricular system with other cavities or organs in the body so that the cerebrospinal fluid can drain. The removal of adhesions over the cisterna magna, which I have often done in similar cases, may result in occasional temporary relief, but is usually unsuccessful. Surgically, we are not able to remove adhesions in the basal cistern, and the removal of adhesions somewhere else still will not permit the fluid to circulate and to reach the cerebral hemispheres. Furthermore, though arachnoidal adhesions can be removed, they will readily reform. A ventriculocisternostomy offers no help, for there is no subarachnoid space into which to drain the fluid; or, if there is a subarachnoid space in the cervical region, the fluid will not be able to reach the cerebral hemisphere for resorption.

The only logical treatment is to anastomose the ventricles with organs outside the central nervous

system, such as the ureter, the peritoneal cavity, or vessels. Several years ago, Dr. O. R. Hyndman devised another type of operative procedure to treat internal hydrocephalus in performing a direct communication between the ventricle and the cisterna ambiens from which the fluid could reach the cerebral convexity. This procedure is a sound one in the cases in which the subarachnoid spaces over the cerebral convexities have remained patent. I would like to ask Dr. Hyndman to describe his technique to us.

Dr. O. R. Hyndman, Veterans Administration Hospital, Iowa City: The technique to which Dr. Perret has reference is this: if one tears away the glomus of the choroid plexus, it is relatively easy to establish a fistula between the pons and the thalamus—a fistula leading from the lateral ventricle into the cisterna ambiens or the subarachnoid spaces around the great vein of Galen. That is known as the cistern of the great vein of Galen, but it also communicates with the cisterna ambiens. Once the fluid gains access to those spaces, it can circulate freely in the subarachnoid spaces over the cerebrum. Now, this operation is based on the premise that in a pyogenic infection, or in an infection where exudate does plug the basal cistern, as Dr. Perret has pointed out, exudate may not be so prominent over the upper subarachnoid spaces. They should be free so that the fluid can be absorbed. Now, that's the technic of the operation, and that's the premise for it.

About seven years ago, in a child brought to me with pyogenic meningitis, the infection was cured, but she had a resultant internal hydrocephalus. There was considerable dilatation of the ventricles, and the child was in very bad straits. She almost died of a complete internal hydrocephalus. I did this operation on one side and established a fistula. Two years later the child had made a complete recovery. We looked at her spinal fluid pressure, and it was normal.

I think that proves two points: (1) our major premise is correct that the upper subarachnoid spaces were in such a state that they could absorb fluid, and (2) the fistula did not heal, at least in a two-year period. In response to a follow-up by letter, we were told somewhat later that the child was still doing well. I feel that if this particular operation works, it provides the simplest and best way of shunting this fluid into the upper subarachnoid spaces.

Dr. Jackson: Are there any comments before we show the pathological sections?

Staff Member: Was the spinal fluid pressure normal at the time of the last admission?

Dr. Jackson: No exact pressure readings are given in the record. However, there was a definite flow of fluid reported. The spinal protein content was markedly lowered, and the sugar content was also relatively low. The chlorides were reported in milliequivalents per liter, rather than in mil-

ligrams per cent, as stated in the protocol, and therefore the value was normal.

Dr. Perret: I took it for granted that the child had developed a hydrocephalus. However, we have no clear cut evidence of that.

Dr. Jackson: No, there was no clear cut evidence of hydrocephalus. The sutures were not separated. There were no definite signs of intracranial pressure being increased.

Dr. Frederic W. Stamler, Pathology: This child seemed to be in a very unusual situation, in that there was complete inactivity of the tuberculous process, and death was caused by residual effects of the infection. There was an old, adhesive meningitis consisting of rather dense scar tissue about the base of the brain, with minimal involvement over the convexities. There was no evidence of active tuberculous infection in the tissue, and no primary tuberculous process was found elsewhere in the body. The child had hydrocephalus on the basis of the obstruction of the flow of fluid, as Dr. Perret indicated. The entire ventricular system of the brain was greatly dilated, and there was evidence that the foramina of Luschka and Magendie were occluded. In each of the lateral foramina, there were small outpouchings completely encased by dense inflammatory adhesions. The larger cisterns of the subarachnoid space, such as the cisterna magna and the basal cistern, were apparently obliterated by fibrous adhesions. The appearance at the time of autopsy was that of rather complete obstruction to the flow of cerebrospinal fluid from the ventricular system. I am a little at loss to explain how there could be free flow to the spinal subarachnoid space, for the obstruction seemed to be complete in that region. There was no apparent activity of the meningitis, and I cannot account for the cells that were found in the spinal fluid some time before death.

We have here, apparently, a rare case of a cure of tuberculous meningitis in which the patient died as a result of the after effects of the infection, rather than as a result of the infection itself. There have been many reports published regarding the findings in tuberculous meningitis and other forms of tuberculosis following streptomycin and associated therapies. Almost universally in these reports, there is evidence that there was residual active infection. I found one report in the *AMERICAN JOURNAL OF MEDICINE*¹ in which the autopsy findings in a man four years following a prolonged episode of proved tuberculous meningitis indicated that the infection had been completely eradicated. That, according to the authors of that report, is the first such case recorded. I think this case would fall into that same category. We found no histological evidence of tuberculosis, and smears and cultures from the brain and meninges were negative. The fact that we found no

1. Jacobson, S. M., and Greene, R. C.: Morphology of healed tuberculous meningitis following streptomycin therapy. *Am. J. Med.*, 14:132-136, (Jan.) 1953.

primary tuberculous focus is a bit unusual, and although such lesions can be overlooked, we searched the organs with that in mind. There were some enlarged mediastinal nodes and some in relation to the mesentery of the small bowel, but these could not be shown to have been involved by tuberculosis. Likewise, the lung tissue was free of any evidence of a tuberculous lesion, but did show acute congestion and edema as part of the terminal course of events.

SUMMARY OF NECROPSY FINDINGS

The principal findings were those of an inactive tuberculous meningitis of a chronic nature, with inflammatory adhesions obstructing the medial and the lateral foramina of the fourth ventricle. This had produced a state of advanced hydrocephalus, with extreme dilatation of the cerebral hemispheres. There was an associated gliosis indicative of generalized chronic inactive ependymitis. No active granulomatous reaction was found, and smears of the meninges, the ventricular fluid and the brain substance were negative for tubercle bacilli. No primary tuberculous lesion was identified.

Other autopsy findings included generalized visceral congestion, cardiac dilatation and acute pulmonary edema.

Death was due to obstructive hydrocephalus caused by adhesions resulting from tuberculous meningitis.

NECROPSY DIAGNOSES

Tuberculous meningo-encephalitis, chronic, inactive

Obstructive internal hydrocephalus, due to occlusion of foramina of Luschka and Magendie by fibrous adhesions

Acute pulmonary congestion and edema

Cardiac dilatation

Visceral congestion, generalized

Dr. Jackson: The lumbar puncture that was done at the time of final admission was five days prior to death. This little boy was running around the ward and was not thought to be in any immediate danger. Further studies were contemplated, but the neurosurgical staff had not yet been asked to see the child. He was being observed to see whether there was any evidence of reactivation of the infection and whether or not we should reinstitute any kind of chemotherapy. There were no signs or symptoms of pulmonary involvement reported prior to his death; however, the postmortem examination showed evidence of pulmonary edema. I should like to have Dr. Perret comment as to the possibility that a sudden block may have had some relationship to the development of pulmonary edema.

Dr. Perret: I don't believe that these blocks occur suddenly, but with increasing dilatation of the ventricular system and increasing intraventricular pressure, it is quite possible that medul-

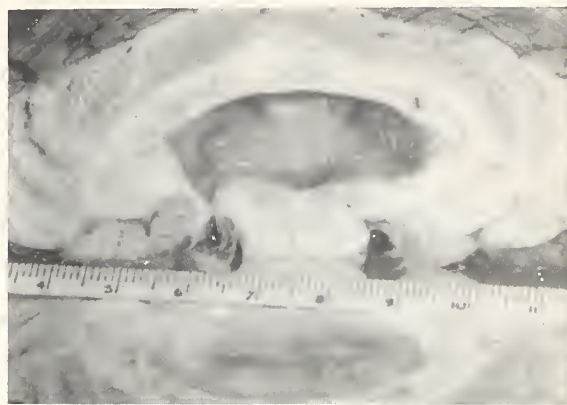


Figure 4. Cerebellum and pons with dilated fourth ventricle. Outpouching fibrous adhesions occlude the foramina of Luschke.

lary compression and, finally, disturbances in the blood circulation may produce sudden death. Occasionally we have seen sudden deaths, often during sleep, of children who had tumors in the cerebellum causing internal hydrocephalus. We believe that the compression of the medulla oblongata associated with inadequate arterial flow or venous outflow is probably responsible for death in these cases.

Dr. Jackson: We have treated 24 children with tuberculous meningitis since 1947. Fourteen of them have died, and ten are still living. Of those who died, a fair number succumbed one or two days after admission to the hospital in extremely poor condition and with histories of infection for considerable periods prior to admission. The other patients who died had miliary tuberculosis in addition, and all were under one year of age. Of the survivors, four are now under custodial care,

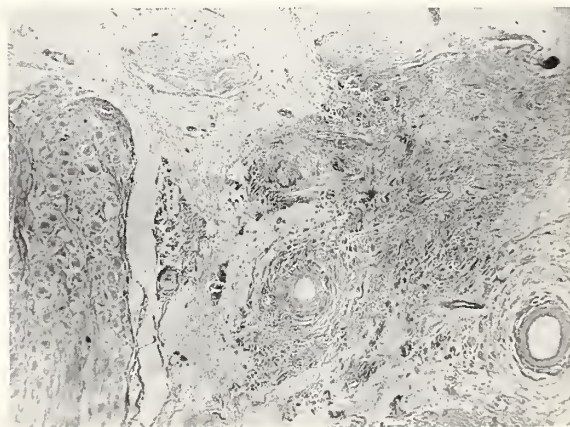


Figure 5. Photomicrograph, basal leptomeninges and nerve ganglion, with fibrosis and obliterative vascular changes of healed tuberculosis.

three are deaf and one has known hydrocephalus. Thus, of the patients who are now living, a fair percentage (eight out of ten) have evidence of residual involvement of the central nervous system. However, in the patients treated more recent-

ly, to whom we have given isoniazid in addition to streptomycin, our results are much more encouraging. But we have not yet had the patients under observation for a sufficient period of time to permit our evaluating this new type of therapy completely.

At this point, I should like to present a report on survivals of patients treated for this disease at another institution.

TUBERCULOUS MENINGITIS SURVIVOR DATA

Herman Kiefer Hospital, 1947-1953

Year	Survived		Expired		Total
	No.	%	No.	%	
1947	0	—	9	100	9
1948	12	24.5	37	75.5	49
1949	12	27.3	32	72.7	44
1950	16	37.2	27	62.8	43
1951	23	52.3	21	47.7	44
1952	19	54.3	16	45.7	35
1953*	31	72.1	12	27.9	43

* Through August 26.

"A marked change has occurred in the prognosis of tuberculous meningitis since streptomycin became available for use; other chemotherapeutic agents have been added subsequently. The table on Tuberculous Meningitis Survivor Data shows the experience at the Herman Kiefer Hospital, in Detroit, where a rather large number of patients with tuberculous meningitis have been treated annually. The table differs from the usual compilation of cases and deaths in that survivors in any given year who die subsequently are allocated to the years in which they first appeared as cases. Thus, for the year 1948, in which 49 cases were initially hospitalized, 37 patients had expired through August 26, 1953; any deaths subsequent to 1948 and belonging to the cases first treated in 1948 have been allocated as deaths to that year. This is done because relapses are notoriously common for tuberculous meningitis, and five years should be the minimum period for determining therapeutic results in cases of this infection. In the table, only figures for the years 1948 and 1949 fulfill this standard. On a short term basis of one or three years, there appears to be real progress in lowering the fatality rate, but three or four years' further observation is needed to determine whether the favorable rate of 52.3 per cent survival, or the similar rate for 1952, will stand up. All survivors are followed at the clinic at three-month intervals, and they are instructed to come to the hospital at the first sign of a relapse.

"It is interesting that from January, 1947, to February, 1952, intrathecal therapy was used on alternate patients admitted to the service. No significant difference in fatality rate was noted between the group treated intrathecally and the group not so treated. Intrathecal therapy was discontinued on February 1, 1952. Slowly the method has found disfavor elsewhere, as is indicated by recent reports from the Veterans Administration



Figure 6. Photomicrograph, wall of third ventricle, with gliosis and irregular ependymal proliferation indicative of healed tuberculosis.

therapy-evaluation group and from the therapy group of the American Trudeau Society.

"Although some modifications of intrathecal therapy are being used, therapeutic regimen in this disease is shifting to the simultaneous use of streptomycin or dihydrostreptomycin, para-aminosalicylic acid (PAS), and isoniazid."

—Franklin H. Top, M.D., Head
Department of Hygiene and
Preventive Medicine, SUI

The statistics from Herman Kiefer Hospital, Detroit, in Dr. Top's table show considerable improvement in the survival of patients treated most recently. There is no question that we are making decided progress in the treatment of children with tuberculous meningitis. We are much encouraged since isoniazid therapy has been introduced in conjunction with streptomycin. Half of the streptomycin is being given in the dihydro form, and there is a suggestion that there is less vestibular and eighth-nerve involvement if one uses a combination of these drugs. We have discontinued using para-aminosalicylic acid in our service because we have had so much gastrointestinal disturbance when doses were given sufficient to sustain a therapeutic blood level. At the present time, we are using streptomycin in conjunction with isoniazid, and isoniazid is being given in a dosage of 8 to 10 mg. per kilogram. Most of the textbooks advocate 5 mg. per Kg., but we have found that it takes at least 8 mg. per Kg., and in some cases up to 20 mg. per Kg. to sustain a blood level as high as 25 mg. per cent, which is considered desirable. Intrathecal therapy has been discontinued in the majority of clinics since isoniazid has become available, and it is hoped that the adverse effects of streptomycin can thus be further reduced. The patients have not been observed for a sufficient period of time to warrant our making any final statements, and the big problem persists of making an early diagnosis so that therapy can be effective and complications decreased. How to deal best with adhesions, when they occur, is still a problem.

Dr. Edward E. Mason, Surgery: The presence of pulmonary edema is rather interesting. It has been observed that sometimes after head trauma, patients rather rapidly develop pulmonary edema and sometimes die of respiratory obstruction from the pulmonary edema. This observation led Weisman² (1939) to review a series of autopsies where either traumatic or spontaneous cerebral hemorrhage had occurred shortly before death. In 686 cases, he found that in two-thirds of the cases the combined lung weight was 900 grams or more, whereas in a control group of cases only about two per cent had lung weights as great as this. Campbell, Haddy, Adams and Visscher³ (1949) examined this problem in dogs by placing a balloon outside the dura but inside the cranial cavity and increasing the intracranial pressure by injection of fluid into the balloon. They found that as they increased the intracranial pressure, a bradycardia occurred, and the animals developed pulmonary edema. They found that if they increased the intracranial pressure slightly more, respiration ceased. There was a point at which increased intracranial pressure would cause pulmonary edema without causing other changes that would lead to death. It is, therefore, possible that this child may have had a sudden increase in intracranial pressure that led to the development of the pulmonary edema noted at post-mortem.

Campbell *et al.* were interested in the mechanism by which increase in intracranial pressure would cause pulmonary edema. This question had been investigated before, but the evidence had been rather inconclusive. They, therefore, catheterized both the arterial and the venous sides of the pulmonary and systemic circulations and observed that as they increased the intracranial pressure, the animals developed a bradycardia. The pulmonary venous pressure increased on the average of 10 mm. Hg., the systemic venous pressure increased about half that much, and the pulmonary arterial pressure increased about 8 mm. Hg. They concluded that this would account for the pulmonary edema, for it was a sufficient increase to give a capillary oncotic pressure greater than the colloid osmotic pressure of the blood. They then repeated these experiments, giving animals atropine in order to prevent the bradycardia, which they thought was probably due to vagal stimulation from pressure on the medulla. They found that they could prevent both the changes in pressure and the pulmonary edema by the use of atropine. Therefore, they suggested that atropine was indicated in a patient having increased intracranial pressure, pulmonary edema and a bradycardia.

Dr. Perret: I wish you to remember that in-

creased intracranial pressure alone does not produce pulmonary edema, as we might have been led to believe by one statement of Dr. Mason's. We have many patients with increased intracranial pressure who do not develop pulmonary edema. I think that intracranial pressure may be a process that sets off a number of events which eventually may result in pulmonary edema. Do you agree with me?

Dr. Mason: I agree absolutely.

P.P.P.P.

"Abandon modesty, all ye who enter here." That might well be the inscription over our hospitals today.

What happens to the entering patient? After a wry smile at the receptionist and a perfunctory exchange with the admitting clerk, he is taken to his room, shown his bed, and introduced to an all-purpose garment of classic design and monolithic simplicity: the hospital gown. Cone-shaped, billowy and sexless, his gown has a circular aperture at the top, two cylindrical sleeves at the sides, and a permanent dehiscence posteriorly. In its pristine state, it covers the anterior portion of the body from the clavicles to the knees. In its slightly used state, it has a tendency to creep up towards the thigh, and after repeated trips to the hospital laundry it eventually winds up at a point about three inches above Hunter's canal in a person of average dimensions.

Now the matter of being in dishabille is of small moment to the patient who is flat on his back and has doctor's orders to stay there. But to the patient who has instructions to leave his sickbed and walk to the bathroom, it is a different thing. Usually, his robe is in a closet at the far end of the room. Usually, his nurse is busy elsewhere. Usually, his roommates are in no position to help. So what is he going to do? Willy-nilly he struggles out of bed, pulls down his gown in a futile effort to make it cover more than it possibly can, and starts on his mission, absurdly conspicuous and painfully embarrassed. Then, just as his back is turned and he is within arm's length of his goal, in walks the nurse to announce a visitor, or in walks the visitor, or in walks the doctor. It is an experience just as painful as the operation, and much more difficult to forget.

The Greek robe is fine for the bed patient. But for the ambulatory patient, it's a source of recurrent mortification. Why not give the poor fellow a shirt and a pair of pants? I'll admit that drawstrings on hospital pants are no joke either, but I'll wager that any patient would rather learn to master the drawstring than to traipse about his room in ludicrous negligee.

The plea is to P.P.P.P., and it does not mean Pass the Pickled Peppers Please, either. It means Please Put Pants on Patients!

Clifford L. Graves, M.D., in the
SAN DIEGO COUNTY MEDICAL BULLETIN

2. Weisman, S. J.: Edema and congestion of lungs resulting from intracranial hemorrhage. *Surgery*, 6:722-729, (November) 1939.

3. Campbell, G. S., Haddy, F. J., and Visscher, M. B.: Circulatory changes and pulmonary lesions in dogs following increased intracranial pressure, and effect of atropine on such changes. *Am. J. Physiol.*, 158:96-102, (July) 1949.

The JOURNAL of the Iowa State Medical Society

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No. 12

FEDERAL HEALTH BUDGET, 1955

A year ago, when we reported the federal budget for health services, the total, \$1,775,882,197, looked pretty frightening. The 1955 figure, \$2,141,681,661, seems even more so. One should look farther than the totals, however. The 1955 budget items include clerical costs and other administrative expenses which were not assigned to the individual programs in earlier years. Thus, in actuality, most of the increases are no more than apparent, and provided that no supplemental appropriations are voted, substantial savings will be effected in some instances.

Yet, however pleased one may be with the greater frankness of the government's revised accounting procedures and with the reductions in estimated costs of specific programs, he can't be satisfied with the present status. Of the \$22,000,000,000 budgeted for all items other than defense security, these medical activities are to cost ten per cent. And \$2,141,681,661 is approximately 17 per cent of all the money that will be spent (by individuals as well as by the government) for medical and health items, including drugs, dental care and drugstore sundries, in the United States during 1955. Thus, dollarwise, health activities in this country remain 1/6 nationalized and socialized.

	1955	1954
Department of Health, Education and Welfare		
Division of Hospital Facilities \$	99,100,000	\$ 66,100,000
National Institutes of Health ..	81,268,000	71,153,000
Bureau of Public Assistance ..	80,000,000	50,000,000

Hospitals and Medical Care ...	33,000,000	33,100,000
Children' Bureau	31,600,000	31,525,000
Office of Vocational Rehabilitation	28,735,000	23,655,500
Assistance to States—General	13,000,000	13,250,000
Tuberculosis Control	6,000,000	6,000,000
Food and Drug Administration	5,100,000	6,250,000
Communicable Disease Control	4,300,000	5,000,000
Engineering, Sanitation & Industrial Hygiene	3,565,000	3,162,500
Veneral Disease Control	3,000,000	5,000,000
Foreign Quarantine Service ..	2,900,000	2,900,000
Office of the Surgeon General ..	2,780,000	2,900,000
Alaska—Disease and Sanitary ..		
Investigations & Control	1,125,000	1,082,000
Reimbursable Health Programs for other Govt. Agencies ..	281,000 (new category)	
Total	395,754,000	340,553,000
Veterans Administration		
In-patient Care in VA Hospitals	558,000,000	555,000,000
Out-patient Care	82,443,000	92,677,900
New Construction	47,000,000	38,685,664
Domiciliary Care	25,205,696	24,248,200
Contract Hospitalization	17,570,867	20,583,100
Medical Adm. and Misc. Operating Expenses	6,889,000	7,757,900
Medical Research	5,500,000	5,500,000
Major Alterations, Improvements and Repairs	3,480,000 (new category)	
Supply Depot Operations	1,350,000	1,350,000
Medical Education and Training	1,300,000	1,300,000
Total	748,738,563	747,415,264
Department of Defense		
Army Medical Services	325,200,000	238,994,000
Air Force Medical Services ..	280,800,000	132,801,000
Naval Medical Services	239,400,000	161,429,000
Office of Asst. Sec. of Defense (Health & Medical)	87,500	87,000
Total	845,487,500	533,311,000
Department of State		
United Nations Children's Fund ..	8,300,000	9,814,333
World Health Organization ..	2,987,667	2,993,400
Pan American Sanitary Bureau ..	1,320,000	1,320,000
Total	12,607,667	14,127,733
Department of Labor		
Bureau of Employees' Compensation	6,341,000	8,500,000
Bureau of Labor Standards	470,000	460,000
Total	6,811,000	8,960,000
Foreign Operations Administration		
Technical Assistance Program ..	18,752,300	24,500,000
Development Assistance Program ..	6,822,000	(New)
Total	25,574,300	24,500,000
Department of Interior		
Bureau of Indian Affairs	22,238,898	21,400,000
Bureau of Mines	5,000,000	5,060,000
Office of Territories	784,600	798,600
Total	28,023,498	27,258,600
Department of Commerce		
Civil Aeronautics Administration ..	258,533	321,000
Bureau of Standards	19,600	300,000
Total	278,133	621,000
Department of Treasury, Narcotics Bureau	2,770,000	2,790,000
Department of Justice, Prisons Bureau	1,300,000	1,326,000
National Science Foundation ...	4,795,000	8,000,000
Federal Civil Defense Administration	28,755,000	26,650,000
Atomic Energy Commission	27,000,000	26,565,000
Health Resources Advisory Committee	95,000	91,000
National Advisory Committee to Selective Service	190,000	265,000
Panama Canal Zone	5,600,000	5,448,600
Federal Trade Commission	1,000,000	1,000,000
Commission on Intergovernmental Relations	414,000	500,000
Commission on Organization of Executive Br. of Govt.	130,000	500,000
Federal Employees' Health Program	6,000,000	6,000,000
GRAND TOTAL	\$2,141,681,661	\$1,775,882,197

We shouldn't want anyone to get the idea that we think the whole of federal or other governmental outlay for health services ought to be eliminated. But we are pleased to note that some small beginnings are being made toward curtailment at the federal level. The share of his income that taxes take out of the citizen's pocket is truly astounding, and we should like to see greater progress made toward returning to him the privilege of deciding how he is to spend his own money.

Federal, state and local taxes, visible and invisible, amount to \$90,000,000,000 a year. A man who earns \$4,500 a year, the California Taxpayers Association has computed, must spend two hours and 35 minutes of his eight-hour working day in earning money to pay his taxes. In contrast, he spends one hour and 37 minutes daily in earning food for a family of four, one hour and 24 minutes paying his rent, 36 minutes paying for clothes and 42 minutes paying for transportation. It takes him only 20 minutes to earn money for his recreation, 23 minutes for the part of his medical care that the government still permits him to buy for himself and his dependents, and other goods and services cost him another 23 minutes of his time.

In other words, the work time that a more-or-less average American puts in just to pay his taxes comes within 26 minutes of equaling the time he spends providing himself and his family the other necessities of life. And that's far too much!

BUREAUCRACY IN MEDICINE

Medicine's contention as regards the inefficiency and consequent undesirability of government-managed patient treatment and care is strongly supported by some miscellaneous items in the newspapers that recently have attracted our attention. One of them is a report¹ of a sharp upturn in the demand for individually financed hospitalization insurance in Great Britain. Although, when the National Health Service began, the insurance men there had conducted obsequies over the remains of that portion of their business, they say it is once more alive and kicking. Most of their 500,000 policyholders have bought during the past two years, and sales during May, 1954, exceeded those for the entire year 1947.

The reasons for that revival, quite as should have been expected, are that under socialized medicine Britons are getting hospitalization tardily, if at all, that fee-for-service care is more expensive than it used to be and that it is growing scarcer. Nursing homes, where less serious ailments are cared for, aren't crowded, but government hospitals have long waiting lists for non-emergency cases. Furthermore, though they are at present reserving 6,000 of their 200,000 beds for

patients willing to pay, they charge 50 per cent more for them than they used to do, and, sometime in the not too distant future, they are likely to stop accepting private patients at all. The British Labor Party decided, on September 30, that if and when it returns to power, it will abolish the system under which quick treatment has been provided—at a price.²

In the U. S. Veterans Administration hospitals, America's gargantuan experiment in socialized hospitalization and medical care, a closely similar situation obtains. The VA has several institutions in nearly every state, and to staff them, doctors and nurses have been taken from private practice and from institutions that serve the general public, but as of September 1, 1954, according to information secured by the Florida Medical Association,³ there were 19,791 patients awaiting admission to its hospitals, of whom all but two were non-service-connected cases. Perhaps the fact that so few of the men really deserving of government care were being kept waiting is to the VA's credit, but perhaps not. Very likely there would have been more on both waiting lists if, like the Britons, they hadn't despaired of getting attention there.

What we imagine is a more or less typical VA hospital situation has been described by Mr. Ed. Klinger, a staff writer for the EVANSVILLE PRESS (Indiana).⁴

An Evansville veteran, crippled for life by a World War II injury, propelled his wheelchair up to the admitting desk at the Indianapolis Veterans Administration Hospital.

His wants were simple: A check-up on his condition.

As a veteran injured while in the service of his country he was entitled to all the medical or surgical care he needed. Had he been a veteran with an ailment not connected with his military service, or acquired since the war, he could have received medical attention by making a statement that he had no resources to pay for it in a private institution.

Here's what the Evansville veteran said happened to him:

"The receiving clerk mistakenly thought mine was a non-service case. He filled out my admission application himself. Without asking me if I could afford private care he also filled out the pauper statement."

"The two veterans just ahead of me had come to the hospital for treatment not connected with their military service. The receiving clerk never bothered to ask them if they could afford care in private hospitals—he just filled out their pauper statements."

The Evansville veteran has been in and out of hospitals ever since his injury. He knows how long it takes for that checkup. It takes three days, and he actually doesn't have to be in the hospital.

At Indianapolis he was required to take a hospital bed. And he was there two weeks to take the tests requiring only three days.

He complained about the loss of time. He was told: "We're simply overloaded. We're processing your checkup as fast as we can."

Overloaded with what? The hospital doctors, most of whom are consultants from private hospitals, didn't know—they aren't required to know. They're only responsible for the care of the patients.

The Evansville veteran asked a hospital executive: "How many of your patients are here for treatment for service-connected ailments?" The executive didn't know. He said they were all veterans so far as he was concerned. He finally ventured the guess, however, that perhaps a third of those in the hospital were suffering from service-connected ailments.

The Evansville veteran asked one of the consulting physi-

2. Laborites oppose hospital pay-beds. NEW YORK TIMES, 104:3C, (Oct. 1) 1954.

3. Florida Medical Association: BRIEFS, Number 99, (Oct. 26) 1954.

4. Reprinted from the EVANSVILLE PRESS in J. INDIANA M. SOC., 47:1108-1109, (Oct.) 1954.

1. Veysey, Arthur: Britons now buying hospital policies. WASHINGTON POST AND TIMES-HERALD, 77:17, (Sept. 25) 1954.



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cians if he had any idea how many of the patients he was treating in his particular specialty had service-connected ailments. The physician said: "I'd say about one per cent."

One per cent to 33 per cent is a wide disparity. The Evansville veteran polled the 24 men in the section of the ward he occupied. He was the only one of the 24 in the hospital for a service-connected ailment.

"In fact," he says, "during my two weeks in that hospital I was the only service-connected patient I had knowledge of. There probably were others—I failed to find them."

One of the patients he queried had developed a tumor in the leg.

He had gone to a private physician in Indianapolis who had recommended its immediate removal. It would cost around \$500. In spite of the fact he was perfectly capable of paying \$500, he decided to get it for nothing at the Veterans Hospital.

Says the Evansville veteran: "This patient was admitted to a room, although he was perfectly able to be up and around—and was. He occupied that room for a month before they got around to performing the operation."

The Evansville veteran calls the Veterans Administration hospital program a "political bureaucracy," and, he says, "It isn't any joke."

"During the remainder of my life I am going to need considerable medical attention if I am to maintain my health and productiveness," he says. (He has an important position.) "Up to now I have taken care of more than 90 per cent of the cost myself because I can't afford to give up the time to go to a Veterans Hospital to get attention I know from experience requires only a few hours."

"Not only myself, but thousands of veterans with genuine service-connected disabilities, which entitle us to free care under the VA, are faced with a real problem."

"We must take our turn among the many more thousands who are chiseling on the program with the connivance of the Veterans Administration."

He considers it an irony that those who need the care and are entitled to it, those for whom the VA hospitals were built, are handicapped by the political aspects of the program and actually get less care than they're entitled to.

The story doesn't end there.

The Evansville veteran has a paraplegic friend whose wheelchair wore out. He applied to the Veterans Administration for a new one. He didn't get it. What he got instead was a long letter of explanation why he couldn't have it. The Veterans Administration had gone beyond its budget—it was broke. Later, perhaps. So the veteran for whom the veterans' protective laws were written went without a wheelchair while the veterans hospitals were loaded up with non-service-connected cases getting a free ride at government expense.

Says the Evansville veteran: "The American Legion cries to high Heaven when any move is made to correct the situation. I have reluctantly reached the conclusion the American Medical Association is right."

"The AMA has been publicly lamenting this situation for years, and has received no reward but criticism. It charges the Veterans Hospital program is being abused. The AMA calls it creeping Socialism. The AMA is too mild; it's worse than that."

will give is sure to constitute a service to the medical profession in Iowa.

We hope that large numbers of doctors look for it in the successive issues of the JOURNAL.

RHEUMATIC FEVER

Recently, a woman of 69 years presented herself at the writer's office with a full blown case of erythema nodosum. One seldom sees so wide and dense a distribution of the characteristic lesions as was present over both her legs and forearms. When asked whether or not she had ever had "rheumatism," she replied, "Yes, and you doctored me." On referring to an old file, we discovered that she had indeed had "rheumatism"; she had had a course of rheumatic fever with erythema nodosum in June and July, 1929. Then, she was 44 years old, and she was treated by means of bed rest and salicylates, with complete recovery. In her attack this year, cortone, penicillin and salicylates were combined, and there has been a rapid regression of her lesions and a lessening of her fever. Leucocytosis has almost disappeared in six weeks, but there is still a tachycardia and a low grade fever. It doesn't seem that our present treatment has produced results much better than did the one that we employed 25 years ago.

That story only goes to emphasize the fact that rheumatic fever is still a disease about which we know too little. We have no uniform specific test on which we can base a diagnosis. At the Second World Congress on Cardiology, Drs. Kellner and Robertson presented the theory that rheumatic heart disease may be caused by an enzyme called proteinase, which is produced by some strains of Streptococci. Just as diphtheria toxin has been recognized as a product of diphtheria infection and thus has been recognized as the real killer, so perhaps a toxin produced by certain Streptococci may be responsible for the heart damage in rheumatic fever. Injection of this proteinase, it has been reported, produces marked damage in the hearts of laboratory animals. Thus we are encouraged to hope that before long, as with diphtheria, an antitoxin will be perfected, not to kill the infection but to neutralize the toxin and forestall cardiac damage.

Dr. Remmelkamp, of Cleveland, thinks that cortone has some ability to prevent heart injury in rheumatic fever. Further study will either prove or disprove his theory.

If one chooses to have faith in some other investigators, he may rest content in the expectation that rheumatic fever will shortly die out, more or less by itself. Drs. T. Duckett Jones and Maurice Campbell, of London, and their fellow panelists at the World Congress already referred to, reported that the incidence of the disease already has fallen as much as 200 or 300 per cent. And they seemed to feel, also, that the course it takes is now less virulent and of shorter duration.

Help Fight TB



Buy Christmas Seals

THE DOCTOR AS BUSINESSMAN

In this issue of the JOURNAL, we are beginning a series of articles about the economics of medical practice contributed by Mr. Millard K. Mills, general manager of Professional Management, Waterloo. The papers are to be brief, they will be designed to interest specialists and general practitioners alike, and, except for the introductory one, they will be specific and practical, rather than general and theoretical.

It is obvious, of course, that this writing Mr. Mills has undertaken to do for us will constitute a species of advertising for his firm. But however that may be, we are confident that the counsel he

Chorea, they say, seems less severe, and bleeding less frequent.

A decrease in the size of the average family and improvement in standards of living may have contributed to these improvements, and the widespread use of penicillin in upper respiratory infections, in acute cases of rheumatic fever, and as a prophylaxis against its recurrence has doubtless been of immeasurable benefit.

But to us here in Iowa, it seems that we are seeing fully as many cases of rheumatic fever now as at any time in the past, and we most certainly cannot lessen our vigilance, for it is still responsible for more cardiac deaths than any other one disease that affects people in the younger age groups.

ABDOMINAL FASCIAL TRANSPLANTS

Fascial transplants have been used, during the past 30 years, in many surgical specialties, chiefly general surgery, ophthalmological surgery, plastic surgery and orthopedic surgery. Particularly in the latter group, rather spectacular results have been attained in the victims of acute anterior poliomyelitis.*

The various uses of fascia fall into three main types: (1) muscle to bone transplant (the extension of a connection between a muscle and a bony attachment by means of a tendinous fascial band, acting as a motor for the transmission of force), (2) bone to bone transplant (the passage of fascial strips as supports or slings to prevent the weight of a part from shifting it into a position of deformity and to check the unopposed action of unbalanced, strong opponent muscles), and (3) muscle to muscle transplant (for the repair of muscle defects from rupture of fibers or tendons—such as gastrocnemius, quadriceps or biceps—or for bridging a functional defect by connecting a muscle above to one below—such as connecting the upper rectus abdominus to the sartorius and tensor fascia femoris in the leg).

Patients with serious extensive involvement of the lower trunk and abdominal groups, with partial or total involvement of the legs, require patience, skill and resourcefulness on the part of all of the therapists, if optimum performance in the various situations is to be built up. When, for a considerable period, motion in many parts of the body has been lost, the patient's memory of movement becomes progressively poorer. He loses muscle sense, position sense and the reflex registration resulting from motion. Therefore, it is essential for the therapist to begin with the muscles and segments that can work and gradually involve the weaker parts in the pattern of movement.

If, before operation, the patient can feel only the twisting of shoulders in his futile efforts to turn over in bed, and postoperatively can feel the

lift of the pelvis and the pull on the fascial bands, his sensory registration of the action of all involved parts broadens. A sense of accomplishment displaces his former overwhelming discouragement. Since many fascial transplant patients fall into this group of very narrow performance range, it is satisfying to the surgeon, the therapist and the patient to note the changes taking place during functional education. When a severely disabled person learns to return himself by his own power to the erect position after falling, he has made a real accomplishment.

THE MAN IS GREATER THAN THE MYTH*

A doctor ill? To most of us such news comes as a shock. It reveals what we all know but are reluctant to accept: that the doctor, too, is mortal. And because, in our frailty, we seek a shield against disease and death, we glorify the doctor, invest him with impossible power.

Ironically, this legend obscures the basic fact that the doctor is a man who must earn his daily bread.

What is the true picture of the doctor in our society?—a man of hope . . . a man dedicated to easing human suffering? Yes! Yet he is more. *The doctor is an economic unit. He is a man who must compete in the marketplace for business, as we all do, whether we deal in pills or pants.* This does not diminish the stature of the doctor. On the contrary, it releases him from the awful burden of saintliness. It establishes him as a man. Wake him at four in the morning. He is sleepy. Call him from his meals. He is hungry. Summon him from his family. He is lonely. Subject to the laws of biology, he is equally subject to the laws of economics. *The doctor works for a living.*

Everyone agrees the doctor is no philanthropist. Nobody expects medical care without paying for it. Yet it would astound us (and the doctors themselves) if we were to tote up the bill the nation's patients owe their doctors and compare it with the bill owed their tailors. Even more outstanding would be the number of hours doctors spend in clinics, hospitals, on calls, for which they receive no payment nor expect any. The doctor deserves no medal for this. But these unpaid bills and freely given hours can be translated into lost income . . . income it would be unseemly for the doctor to insist upon. The legend of the doctor prevents him.

This incongruous situation becomes even sharper when viewed against the accepted business practices in other fields. Do bankers offer their specialized knowledge and time without expectation of payment? Do lawyers? Brokers? Accountants? We don't expect them to, nor do we think the less of them for it. In fact, we would think a businessman foolish who did not seek every profit to which he is entitled. The doctor cannot. There is his legend to be appeased.

It is nothing for a giant to do gigantic things. It is within his nature to do so. But it is something when a man transcends his mortality. And this is the secret of the doctor's stature. As a mere man he must rise above his limitations.

This is the American doctor—a man greater than his myth.

* Lowman, Charles L.: Abdominal fascial transplants (Ann Arbor, Edwards Bros., 1954).

* Advertisement published in Newsweek, October 25, 1954, p. 99, by Key Corporation (pharmaceuticals), Miami, Florida.

MINUTES OF MEETINGS OF STATE SOCIETY OFFICERS AND COMMITTEES

SUBCOMMITTEE ON MENTAL HEALTH

October 23, 1954

The Subcommittee on Mental Health of the State Society met in Omaha Saturday morning, October 23, 1954, with the following members present: Doctors John I. Marker, of Davenport, M. B. Emmons, of Clinton, H. C. Merillat, of Des Moines, J. D. Mahoney, of Council Bluffs and G. R. Rausch, of Sioux City. Minutes were read and approved; the report on the television program on mental health was given; and legislation was discussed. The Committee voted unanimously to endorse legislation setting up a commission to study the problem of alcoholism, to support the establishment of a residential treatment center for emotionally disturbed children at Iowa City, provided it is put under the same control as the Psychopathic Hospital, and to try to introduce a bill for a model commitment law. Subjects for the JOURNAL articles were assigned, and the meeting adjourned about noon.

SUBCOMMITTEE ON RURAL HEALTH

October 27, 1954

The Subcommittee on Rural Health of the State Society met in the central office Wednesday morning, October 27, with the following persons present: Doctors B. F. Howar, of Webster City, S. P. Leinbach, of Belmond, R. E. Griffin, of Sheldon, D. G. Sattler, of Kalona, and R. S. Jaggard, of Oelwein, together with Miss Mary McCord, Committee secretary. Informal discussion concerned the stand of the American College of Surgeons, the problem of interesting more young men in general practice, the place of the small hospital in the present hospital-professional relations matter; constructive publicity; and assistance from the College of Medicine. The meeting adjourned about 4:00 p.m.

SUBCOMMITTEE ON REHABILITATION

November 10, 1954

The Subcommittee on Rehabilitation of the State Society met in the central office Wednesday afternoon, November 10, with the following persons present: Doctors C. B. Larson, of Iowa City, C. O. Adams, of Mason City, D. C. Wirtz and H. H. Samberg, of Des Moines, E. A. Larsen, of Centerville, and the Committee secretary, Miss Mary McCord.

Dr. Larson said that at its last meeting the Committee had set three goals: a survey of existing facilities for rehabilitation; a definition of rehabilitation; and education of the medical profession and the public as regards what constitutes rehabilitation. He read some concepts, and the Committee felt they were very good. Dr. Wirtz reported on existing facilities; the educational

program was discussed; future activity was outlined; and the meeting adjourned about 5:00 p.m.

HYPERTENSION UNAFFECTED BY SALT REDUCTION AND TOBACCO ABSTINENCE

Individuals over 40 who had decreased their salt intake for ten years and do not smoke showed a higher prevalence of hypertension, according to a preliminary inquiry among 799 persons conducted by C. A. D'Alonzo, M.D., of the E. I. Du Pont de Nemours & Co. and reported in the November issue of *INDUSTRIAL MEDICINE AND SURGERY*.

The study also confirms previous indications that there is a greater chance of a child's having hypertension if one or both of his parents have it, and it also appears that the child is more likely to have the difficulty if just his mother, rather than just his father, has it.

COUNTY SOCIETY P-R MANUAL

A new Public Relations Manual for county medical P-R chairmen, the first textbook of its kind ever published, is off the presses and will be mailed from Chicago to state medical societies very shortly.

The manual will be made available to the county society people *only* through the office of the State Medical Society.

The indexed manual is a complete P-R primer. It not only reports what other societies have done, but tells the P-R chairman what his own society can do and—even more important—how to do it.

Studies by the AMA have revealed eight basic programs which, if put into operation, will woo the understanding and confidence of the public. Spelled out in the manual is the organization and promotion of: emergency call systems, mediation committees, press relations, speakers' bureau, society member indoctrination, provision of medical care for all, public service activities and citizenship activities.

IOWA LAGS BEHIND IN AMEF GIFTS

With only a month left of 1954, Iowa physicians contributing to the American Medical Education Foundation, for the private support of medical schools, number 67 fewer than last year, and the total of their contributions this year is \$4,962 less than it was for 1953. So far, in 1954, 73 doctors have given \$4,284.20.

From the country at large, AMEF has fared somewhat better than last year. It has received \$1,051,000 from more than 17,000 contributors, reaching those totals about a month earlier than it did in 1953. But because its directors, last January, saw the need for more money than was collected last year and raised their sights, the Fund is still \$149,000 short of its goal.

The following units already have equalled or exceeded their 1953 totals either in number of contributions, in amount, or in both: Alabama, Alaska, Arizona, Arkansas, California, District of Columbia, Hawaii, Illinois, Louisiana, Massachusetts, Oklahoma, Rhode Island, South Carolina, Texas, Virginia, Wisconsin, and Wyoming.

Attorney General Leo A. Hoegh Issues a Second Opinion Upon

The Corporate Practice of Medicine by Hospitals and the Division of Fees By Physicians

November 8, 1954

Mr. Louis B. Blair, President
Iowa Hospital Association
Cedar Rapids, Iowa

Wendell L. Downing, M.D., Chairman
Board of Trustees
Iowa State Medical Society
Le Mars, Iowa

Gentlemen:

I have your joint letter dated October 14, 1954, in which you on behalf of the Iowa Hospital Association and Iowa State Medical Society request me, as the Attorney General, to consider additional statements which had been submitted by each of the above groups relative to an official opinion issued by this office on February 19, 1954.

Shortly after that official opinion was issued, a controversy developed between the Iowa State Medical Society and the Iowa Hospital Association regarding physician-hospital relationships. During the months of May through August, 1954, I was requested to have conferences with the two groups regarding this opinion. Although it is not generally within the province of the Attorney General to serve as a mediator, I was glad to offer my assistance in attempting to resolve the differences between these two groups because of the serious implications of this controversy for the public. During conferences, with the two groups, it was my observation that both groups had dedicated themselves to the principle of excellent health care for the people of Iowa, and that each group had the welfare of the patient in mind. It was also our observation that this controversy between the two groups could be resolved without serious difficulty.

In an effort to resolve the differences between the two groups, our office suggested that each group submit types of contracts for physician-hospital relationships to us which they thought would be satisfactory. Each group submitted three contracts. After reviewing these contracts and carefully considering the contentions of each group, we prepared a compromise contract on July 7, 1954, which complied with the laws of Iowa. This compromise contract was submitted to each group and the two groups were asked to confer in the hope that this compromise contract would serve as a basis of agreement.

I have been informed that on July 13, 1954, this compromise contract was discussed at a joint meeting of representatives of the Iowa Hospital Association and the Iowa State Medical Society. At a conference with representatives of these two groups in my office the following day, representatives of the Iowa State Medical Society stated that they accepted this contract and representatives of the Iowa Hospital Association

stated that they accepted 14 of the 17 sections in the compromise contract. The two groups were urged to continue their conferences.

Subsequently, on July 20 the Iowa Hospital Association, through their attorneys, notified this office that approval of the three contracts which they had previously submitted was withdrawn and that approval of those sections of the compromise contract to which they had previously agreed, was also withdrawn. At this same time, the Iowa State Medical Society advised this office that they still approved the compromise contract.

At a meeting of the two groups in my office on August 17, 1954, the Iowa State Medical Society and its attorneys, advised us again that our Opinion of February 19, 1954, correctly stated the law. The Iowa Hospital Association and its attorneys on August 17, 1954, advised us that they now agreed that our opinion of February 19 correctly stated the law on the basis of the facts that had been submitted by the Board of Medical Examiners. They maintained, however, that we did not have all of the facts pertinent to this subject of physician-hospital relationships. The Iowa Hospital Association asked for the opportunity to submit additional facts and then presented a copy of some additional facts to this office. Copies of these additional facts were also submitted to the Iowa State Medical Society. As the Attorney General, I then requested the attorneys for the two groups to confer for the purpose of seeing whether they could agree on the validity of these additional facts.

To date, this office has not received a supplemental statement of facts which have been agreed to by both groups, but the Iowa State Medical Society on October 4, 1954, submitted a statement to this office reviewing the facts which had been presented by the Iowa Hospital Association on August 17. The additional facts submitted by the Iowa Hospital Association were concerned with the practice of pathology and contained no references to the practice of radiology. It must be concluded, therefore, that the Iowa Hospital Association believes that the facts regarding radiology as submitted originally by the Board of Medical Examiners, were acceptable. The additional facts regarding pathology as submitted by the Iowa Hospital Association were set forth in three sections. These facts were concerned with the performance of laboratory tests on hospital patients, the examination of tissue removed surgically, the teaching obligations of pathologists, and the direction and supervision of the laboratory incident to the performance of these laboratory tests and examinations. The statement submitted by the Iowa State Medical Society regarding these additional facts was concerned with the role of pathology and radiology services in the diagnosis and treatment of disease and the professional training and status of

physicians who direct and supervise departments of radiology and pathology where these services are rendered.

After reviewing these additional facts submitted by the Iowa Hospital Association and the statement submitted by the Iowa State Medical Society, it is our conclusion that laboratory procedures performed in departments of pathology, and x-ray examinations performed in departments of radiology, are integral parts of the diagnosis and treatment of human ailments and therefore constitute integral parts of the practice of medicine. The fact that some of these laboratory procedures are performed by technicians under the direction and supervision of a licensed physician rather than by the physician himself, does not alter the medical nature of these procedures. This viewpoint is recognized in Regulation No. 27 of the Rules and Regulations for Hospitals and Related Institutions approved by the Hospital Licensing Board of Iowa as of June 30, 1948 which states, "All laboratory services shall be under the supervision of a physician, preferably a clinical pathologist."

We again quote from our original Opinion as follows: "In the case of *State v. Hughey*, 208 Iowa 842, 226 N.W. 371, the defendant was prosecuted under charge of practicing medicine without a license. His argument was that inasmuch as he gave no medicine, he could not be guilty of practicing medicine. At page 846 of the Iowa Reports the Supreme Court stated:

"The term 'practice of medicine' is defined by Section 2538. It is not confined to the administering of drugs. Under this statute, one who publicly professes to be a physician and induces others to seek his aid as such is practicing medicine. Nor is it requisite that he shall profess in terms to be a physician. It is enough, under the statute, if he publicly profess to assume the duties incident to the practice of medicine. What are 'duties incident to the practice of medicine?' Manifestly, the first duty of a physician to his patient is to diagnose his ailment. Manifestly, also, a duty follows to prescribe the proper treatment therefor. If, therefore, one publicly profess to be able to diagnose human ailments, and to prescribe proper treatment therefor, then he is engaged in the practice of medicine, within the definition of Section 2538.

"It is our conclusion that when the physicians in charge of the respective departments inquired about do give their opinion as to the condition of the patient based upon x-ray or laboratory procedures, they are 'diagnosing human ailments,' and when they make themselves available for conference or assist in determining proper treatment for the condition found to exist, they are 'engaged' in the practice of medicine and surgery. For additional authority, see 41 Am. Jur., 'Physicians and Surgeons,' page 151, Section 24; *State v. Howard*, 216 Iowa 545, 245 N.W. 871; and *State ex rel Bierring vs. Robinson*, 236 Iowa 752, 19 N.W. 2d 214."

There is no reason to change this original Opinion on the basis of a review of the original facts submitted by the Board of Medical Examiners or on the basis of the additional facts submitted by the Iowa Hospital Association or statements submitted by the Iowa State Medical Society except to elaborate on one portion used in the original Opinion. In this original Opinion we stated:

"We do not intend to say that the mere ownership and operation of a radiology department or pathology laboratory by a corporation in and of itself means that they are engaged in the practice of medicine. Consideration must be given to the hospital for the use of its equipment and facilities, but in our opinion this can only be done through a lease arrangement with a licensed member of the medical profession resulting in a true landlord-tenant relationship with freedom of complete independent judgment and oper-

ation as the licensed member deems best. Such an arrangement would permit the physician in charge of the department to be directly responsible to the patient and make possible the paying of the fee for professional services direct to that physician. Under such an arrangement the hospital could not legally hold itself out to the public as a corporation offering the professional services. This, of course, is very important in view of the provisions of Section 147.93 quoted above with respect to what constitutes prima facie evidence of engaging in the practice of the medical profession. Clearly the type of arrangement just discussed is not apparent under the provisions of the contracts mentioned in your statement of facts."

A supplemental statement regarding this section is indicated. Although, as stated in the Opinion, a lease arrangement complies with the law, there are other types of arrangements which also comply with the law. The deciding factor as to whether an arrangement complies with the law or not is whether the arrangements make it possible for the physician in charge of the radiology department or pathology department to be directly responsible to the patient on whom laboratory or x-ray procedures are being performed. An example of another type of arrangement is the compromise contract which I submitted to the Iowa Hospital Association and the Iowa State Medical Society on July 7, 1954. This compromise contract stated:

AGREEMENT

THIS AGREEMENT made and entered into this day of, a corporation not for profit, organized, existing and licensed under the laws of the State of Iowa, hereinafter called the "Hospital," and M.D., hereinafter called the "Doctor," WITNESSETH:

WHEREAS the Hospital is a non-profit corporation owning and operating a Hospital in the City of, Iowa; and

WHEREAS in connection with the operation of said Hospital, the Hospital maintains certain pathology and radiology facilities; and

WHEREAS the Doctor is a physician duly licensed to practice medicine in the State of Iowa and is a specialist in pathology or radiology; and

WHEREAS, it is desired that patients in the hospital be assured qualified pathological and radiological service.

NOW THEREFORE IT IS MUTUALLY UNDERSTOOD AND AGREED AS FOLLOWS:

1. The Hospital agrees to appoint the Doctor as Pathologist and Director of the Pathology Department or Radiologist and Director of the Radiology Department upon recommendation of the Medical Staff as provided in their Constitution and By-Laws effective on the day of, 1954, for an indefinite period and the Doctor agrees to serve in such capacity for such period subject to the terms and provisions of this Agreement provided, however, that either party hereto may terminate this Agreement by giving ninety (90) days written notice by registered mail.

2. The Doctor shall be responsible for the administration, supervision and operation of the Pathology Department or Radiology Department in accordance with the standards established therefor by the Medical Staff of the Hospital, the administration and in accordance with generally accepted standards therefor in hospital pathology or radiology departments of similar size and character; it being the express desire of the parties hereto to furnish the community with pathology or radiology service of the highest possible quality commensurate with the ability to provide the same to the general public at reasonable cost.

3. As Pathologist and Director of the Pathology Department or Radiologist and Director of the Radiology Department, the Doctor shall prepare the budget therefor and shall make recommendations concerning the number and qualifications of the personnel to be employed in these departments, the compensation to be paid to such employees, the equipment, material and supplies needed in the operation thereof. All such recommendations shall be subject to the approval of the Hospital Administration provided, however, that in the event of disagreement between the Doctor and the Administration, the same shall be submitted to the Joint Conference Committee for recommendations, any decisions being subject to final approval by the Board of Trustees of the Hospital.

4. The Hospital agrees to provide sufficient space, suitably located, together with the equipment, supplies and personnel necessary to assure the proper operation of the Pathology Department or the Radiology Department.

5. All employees shall be paid by the Hospital and shall be employees of the Hospital under the direction and supervision of the Doctor subject to the Rules and Regulations of the Hospital applicable to employees generally.

6. The doctor shall be responsible for the supervision of personnel in the Pathology or Radiology Departments and for the training and instruction thereof and in the skills required for their work. All details of the operation of the Pathology or Radiology Department, the planning, direction and execution of the work thereof, the hiring and firing and disciplining of employees shall be the responsibility of the Doctor.

7. The Doctor agrees, as a member of the Staff, to participate in the Teaching and Training Programs of the Hospital for nurses, interns, residents and members of the Medical Staff of the Hospital, and for any postgraduate courses that the Hospital Staff wishes to undertake.

8. The Pathologist or Radiologist agrees to compensate the Hospital for the use of space, equipment and maintenance thereof, supplies and salaries of personnel. Such compensation shall be adequate based upon sound cost accounting principles.

9. The Doctor will bill in his own name for Pathology or Radiology Services. This bill may be rendered by the Doctor directly or by the Hospital Cashier as the collection agent for the Doctor.

10. The Doctor agrees to render professional services of a quality acceptable to the Medical Staff and the Doctor shall be available so as to insure the proper operation of the Pathology or Radiology Department. (Insert appropriate provisions.)

11. It is agreed that the fees charged by the Doctor for pathology or radiology services shall be reasonable and in accordance with average fee schedules for pathology or radiology services in the region. The fee schedules for pathology or radiology services shall be subject to review by the Joint Conference Committee at all times. In case of disagreements which cannot be resolved by the Joint Conference Committee, such disagreements should be referred to the Grievance Committee of the County Medical Society.

12. It is agreed that the Doctor may use the Pathology or Radiology facilities of the Hospital including equipment, supplies and personnel for all pathology or radiology practice in which he may wish to engage in addition to the normal volume of work originating

at the Hospital provided that the same does not interfere with the normal operations of the Pathology or Radiology Department, his duties as Pathologist or Radiologist or his availability for the rendering of professional services on work originating at the Hospital.

13. It is agreed that the Doctor shall be permitted a reasonable vacation each year and that he shall be permitted to attend such scientific or professional meetings as he would normally be expected to attend provided that he assumes complete responsibility including financial responsibility for professional coverage in his absence so as to avoid any interruption or interference with the proper functioning of the Pathology or Radiology Department.

14. Whenever used in this Agreement or in the interpretation thereof, the term "professional services" shall mean those services rendered by the Doctor in directing, supervising and/or executing the work of the Pathology or Radiology Departments.

15. It is agreed that such other pathologists or radiologists, who are members of the medical staff of the hospital and qualified to practice pathology and radiology, shall be allowed to practice pathology and radiology within the hospital.

16. In all matters in connection with this contract the welfare and interest of the patient shall always be considered paramount, and particularly as to three phases, namely (1) reasonable cost for the care within sound economic principles, (2) a constant endeavor to improve the care given to the patient, and (3) under no circumstances shall there be any decrease in the quality of the care rendered to the patient.

17. Whenever used in this Agreement, "Joint Conference Committee" shall mean the "Joint Conference Committee" as required by the Joint Committee on Accreditation of Hospitals.

I have also received an additional statement from the Iowa State Medical Society in which they have advised me that in the spirit of trying to settle this matter by conference they have redrafted sections 8 and 9 which are the particular sections in dispute and in addition section 11, and I quote herein the revised sections 8, 9 and 11 as submitted by the Iowa State Medical Society which are as follows:

"8. Fair and reasonable allocation of the fees charged for pathological and radiological services shall be made by the Doctor to the Hospital for the facilities, employees it compensates, and general operating expenses allocable to the Pathological or Radiological Department, which shall be .. per cent of the fees.

"The fees for pathological and radiological services in the hospital shall be billed in the Doctor's name. The bill may be rendered by the Doctor directly or by the Hospital Cashier as a collection agent. Each party shall be entitled to payment and accounting on the first day of each month, and each shall have the right to inspect or audit the books and records in connection with this income at least once in every six months' period.

"9. The Hospital admission agreement signed by the patient or his legal representative shall contain the following: 'Pathological and radiological services are medical services performed and supervised by physicians, and the facilities are furnished by the Hospital for said services, and I request that the fees for the pathological and radiological services and facilities shall be made in one bill in the name of the Doctor and consent that an allocation of the fees may be made by the Doctor to the Hospital.'

"The doctor as radiologist or pathologist and as Director and supervisor of the Department of Radiology or Pathology also serves as a consultant to the Medical Staff by rendering medical diagnosis and treatment through laboratory and x-ray reports of procedures performed in departments of radiology or pathology. Such diagnosis and treatment shall be reported in writing and copies shall be furnished the

hospital for its records. The radiologist or pathologist shall be personally and legally responsible to the patient for such medical diagnosis and treatment.

"11. It is agreed that the fees charged by the Doctor for pathology or radiology services shall be reasonable and in accordance with average fee schedules for pathology or radiology services in the region. The fee schedules for pathology or radiology services shall be subject to review by the Joint Conference Committee at all times."

In our opinion, these changes suggested by the Iowa State Medical Society also comply with the law.

One of the points frequently referred to in conferences in my office between the Iowa State Medical Society and the Iowa Hospital Association had to do with the operation of pathology and radiology departments in small hospitals. Regulation 27 of the Rules and Regulations for Hospitals and Related Institutions as approved by the Hospital Licensing Board on June 30, 1948, states: "All laboratory services shall be under the supervision of a physician, preferably a clinical pathologist." There are available to all hospitals licensed in the State of Iowa, duly licensed physicians on the Staff who render medical care to the patients in the hospitals. Such duly licensed physicians may practice radiology and pathology just as they practice obstetrics or surgery. Such physicians may, therefore, direct, supervise and perform laboratory procedures and x-ray determinations just as they perform other procedures incident to their medical practice.

The Medical Practice Act of Iowa was originally enacted for the protection and benefit of the people of Iowa. In my opinion, the Medical Practice Act still provides adequate protection for the people of Iowa and adequately provides for the development of physician-hospital relationships that will insure the proper quality of health care for the people of Iowa. It is also my opinion that this controversy between the Iowa State Medical Society and the Iowa Hospital Association can be settled satisfactorily and that the compromise contract prepared in this office or some modification thereof, as suggested by the Iowa State Medical Society or some other type of contract developed between individuals and physicians in compliance with the law might serve as a satisfactory basis of settlement. I have urged both physicians and hospitals to recognize their obligations to the public and to get together in a spirit of cooperation so as to end this present controversy. I am urging the Board of Medical Examiners to render all possible assistance in the bringing of this controversy to an end and am sending them a copy of this letter.

Very truly yours,

LEO A. HOEGH,

Attorney General of Iowa.

DOUBLE CHRISTMAS SEAL THIS YEAR

The frolicking children dancing across two companion Christmas seals, this year, commemorate a double anniversary. It is now just 50 years since the National Tuberculosis Association was founded and since the first selling of Christmas seals, in Denmark.

The double seal has the added significance that funds raised through its sale finance the fights against both tuberculosis and heart disease. Seven Iowa counties (Linn, Dubuque, Clinton, Scott, Woodbury, Johnson and Cerro Gordo) will have separate Heart Fund drives during next February.

PROLONGED-ILLNESS INSURANCE RIDER

For an additional premium of \$1 a month for an individual, or \$2 a month for a family, Massachusetts Blue Cross and Blue Shield have undertaken to protect subscribers against the catastrophic costs of several chronic or debilitating illnesses and mishaps.

Blue Shield, in that state, provides medical, surgical and obstetrical services in the hospital, and surgical and obstetrical services outside the hospital. Anesthesia, diagnostic and therapeutic X-ray, and endoscopy are also covered.

The \$12 Blue-Cross contract costs \$5 per family per month, and the Blue Shield contract, under which families whose incomes are \$5,000 or less get full service coverage, costs \$4.75 per family per month.

For the additional monthly charge, members are to be protected against most of the costs of selected illnesses and injuries until out-of-pocket expenditure would otherwise have amounted to \$2,000 to physicians and \$3,000 to all other parties. These amounts are in addition to benefits provided under the basic contracts.

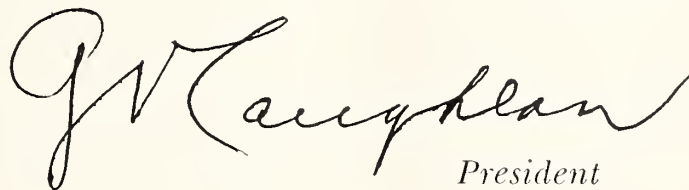
Eighteen categories of illnesses and injuries are to be covered immediately, and others may be included later, provided that investigation justifies the Plans in covering them. Those 18 are (1) poliomyelitis and its late effects, (2) cancer (including disseminated cancer such as lymphoma, myeloma, leukemia, aleukemia and Hodgkin's disease), (3) benign neoplasms of the brain and spinal cord, (4) subacute combined degeneration of the spinal cord, (5) cerebral hemorrhage, embolism or thrombosis, (6) coronary embolism or thrombosis, (7) subarachnoid hemorrhage, (8) rheumatic fever or chorea, (9) congestive heart failure, (10) active pulmonary tuberculosis, (11) ulcerative colitis and regional enteritis, (12) cirrhosis of the liver with ascites requiring paracentesis or following a shunt operation, (13) chronic nephrosis or chronic nephritis with uremia, (14) pemphigus, (15) myasthenia gravis, (16) amputations where prostheses are indicated, (17) fractures, and (18) hemiplegia, paraplegia or quadriplegia.

Except for extended care in a nursing home, it is anticipated that the main items of expense connected with prolonged illness will be the hospital charges and physicians' fees for services rendered during hospitalization. Because benefits for the bulk of those expenses are already provided for all Blue Cross-Blue Shield members under their basic certificates, and because these expenses are also controlled for the 80 to 85 per cent of the members who are entitled to physicians' services without additional charge under Blue Shield, it is anticipated that the financial burden placed upon the prolonged illness contract itself should not be excessive.

President's Page

Now the holiday season nears, and the end of the calendar year. Much work for the good of Iowa Medicine has been done, in 1954, by the officers, the headquarters staff, the councilors and the unselfish committeemen of the Society.

The president takes this opportunity to express his appreciation to all of them, and to all of the members of the Iowa State Medical Society. He extends his sincere good wishes for a Merry Christmas and a Happy New Year.

A handwritten signature in cursive script, reading "J. W. Laughlan". The signature is fluid and elegant, with the first letters of each word being capitalized and prominent. Below the signature, the word "President" is printed in a simple, serif font.

President

Iowa Academy of General Practice

President—Frank D. McCarthy, M.D., Sioux City

President-Elect—William M. Sproul, M.D., Des Moines

Vice President—Charles A. Nicoll, M.D., Panora

Secretary-Treasurer—Donald H. Kast, M.D., 720 Bankers Trust Bldg., Des Moines

Executive Secretary—Mrs. Elizabeth B. Nelson, 3600 Franklin Ave., Des Moines

COMING PROGRAMS

State

January 20, 1955 Iowa Methodist Hospital, Des Moines

Program by the staff of Iowa Methodist Hospital

Guest speaker: M. Edward Davis, M.D., Chicago, Illinois

April 24-27, 1955 Veterans Memorial Auditorium, Des Moines

Annual Meeting of the Iowa State Medical Society

May 19, 1955 Lederle Symposium on "Heart Disease"

National

March 28-31, 1955 Los Angeles, California

Annual Meeting of American Academy of General Practice

CEDAR RAPIDS MEETING

The Formal Postgraduate Course held in Cedar Rapids on November 4 was another highlight in the series we have been presenting. Dr. Priscilla White, of the Joslin Clinic, Boston, in her calm, quiet and positive manner, benefited all of us by her lectures on diabetes. Dr. Lee F. Hill, of Des Moines, spoke on subjects in the field of pediatrics with his usual graciousness. Everyone felt that his remarks were timely and very instructive.

Mr. Tait Cumins, TV and radio sports director of WMT and WMTV, was the luncheon speaker. His talk regarding Iowa football, as well as football in general, was punctuated with many laughs and proved to be the relaxation we all needed. Even our guests forgot their heavy lecture schedule as they listened to him.

PATIENT RELATIONS

A large, bright neon sign directly inside the service entrance of a garage, so that it could be seen by all who came in, provided one of the inspirations for this article. It consisted of two words, "Customer Relations," and a large red arrow pointing to a desk. The other was also a sign—and also in a garage, as it happened—reading "If Service Isn't Good, It Isn't Service." Though perhaps not by means of flaming displays

in our waiting rooms, the ideas that those signs convey should be branded upon our minds. PR (Patient Relations) ought to be one of the most important concerns of every doctor, for it is essential that each of us treat his patients as he himself would want to be treated.

Good Patient Relations begin in the doctor's office, with each individual patient, and flow from there to the community. From the mishandling of a single complaint, false impressions regarding doctors in general, as well as one physician in particular, can spread throughout a town. Conversely, though bad news is said to travel farther and more rapidly than good, the prompt, competent and considerate handling of individual cases is likewise reported by word of mouth and redounds to doctors' benefit.

There are many things we can do to improve our PR. The following are but a few.

First. Establish a pleasant office. Effort should be made to make the patient comfortable. Cheerful surroundings and comfortable furniture, with good light for reading, are necessary. Careful selection and training of office personnel are most important. If the patient is to be successfully treated, he must be made to feel at ease.

Second. Give enough kindly attention to each individual so as to make him like you. Explain so that he can understand. Be sincere, and, above all, be honest.

Third. Many active physicians find that definite appointments are a means of avoiding irritation for both their patients and themselves. When people have waited from two to four hours in the outer office, they are in a disagreeable mood and are trying to the doctor. The way appointments are arranged must be worked out to suit each individual practice. But appointments *really* work in a general practice, and people *like* them.

Fourth. The telephone can do a lot to establish friendly relations. Be sure that you, as well as your assistant, are courteous on the telephone. If your secretary places a call for you, for example, be ready to talk at once. The person you have called may be even busier than you are, or his time may be more valuable than yours. Doctors have been known to make people hold the line for five or more minutes, and that sort of thing

(Continued on page 589)

THE DOCTOR'S BUSINESS

Finances

MILLARD K. MILLS*

WATERLOO



"The practice of medicine is not a business, but it should be businesslike." So states the PUBLIC RELATIONS MANUAL of the American Medical Association. This principle cannot be emphasized too strongly. Arguments are all for it; none against it.

Being businesslike does not mean being uncharitable, selfish, mercenary or any other such thing. Being thoughtful of people demands efficiency in dealing with them!

Possibly you still ask yourself whether it isn't harmful to patient relationships to place much emphasis on businesslike procedures. Years ago, the doctor was highly revered because of his careless approach to financial matters. Don't patients lose respect for you if your office seems too businesslike?

The answer is "No!" Times have changed. People have come to expect and demand more efficiency. Years ago, patients knew all about their doctor and his family history, just as he did about them and theirs.

Gradually, as the automobile, the train and the airplane began bringing more and more people into the cities and caused frequent replacements among the residents of smaller towns, there was a greater need for careful, businesslike procedures in all dealings among people.

YOUR REPUTATION

And as people began to know less about a physician personally, they became inclined to judge his ability by his measure of financial success. Nowadays, if your office is dowdy, if your home is in a poor neighborhood, if the car you drive is shabby, people wonder why. They tend to think that if you were a very good doctor, you'd certainly be able to afford something better than that. Naturally, you must be careful not to go to the other extreme either. But let the appearance you make be favorable, or your patients and prospective patients will question your ability every time!

As a doctor, you are rendering a vital service to your community. It is important that your office and your personal finances be handled as efficiently as possible. You owe this to your patients, your family and yourself!

First, consider the patient. You want to keep abreast of all improvements in medicine and medical equipment.

YOUR FAMILY AND YOURSELF

On the other hand, what about yourself? You are entitled to a just return for the time and money you put into your education, to say nothing of recompense for your efforts. You deserve a certain amount of freedom in your life, too, so that you can enjoy your family and friends. You want to live comfortably, to provide adequately for your dependents and to be able to retire when you feel you should. A well-managed office and wise financial decisions are essential to your plans, Doctor.

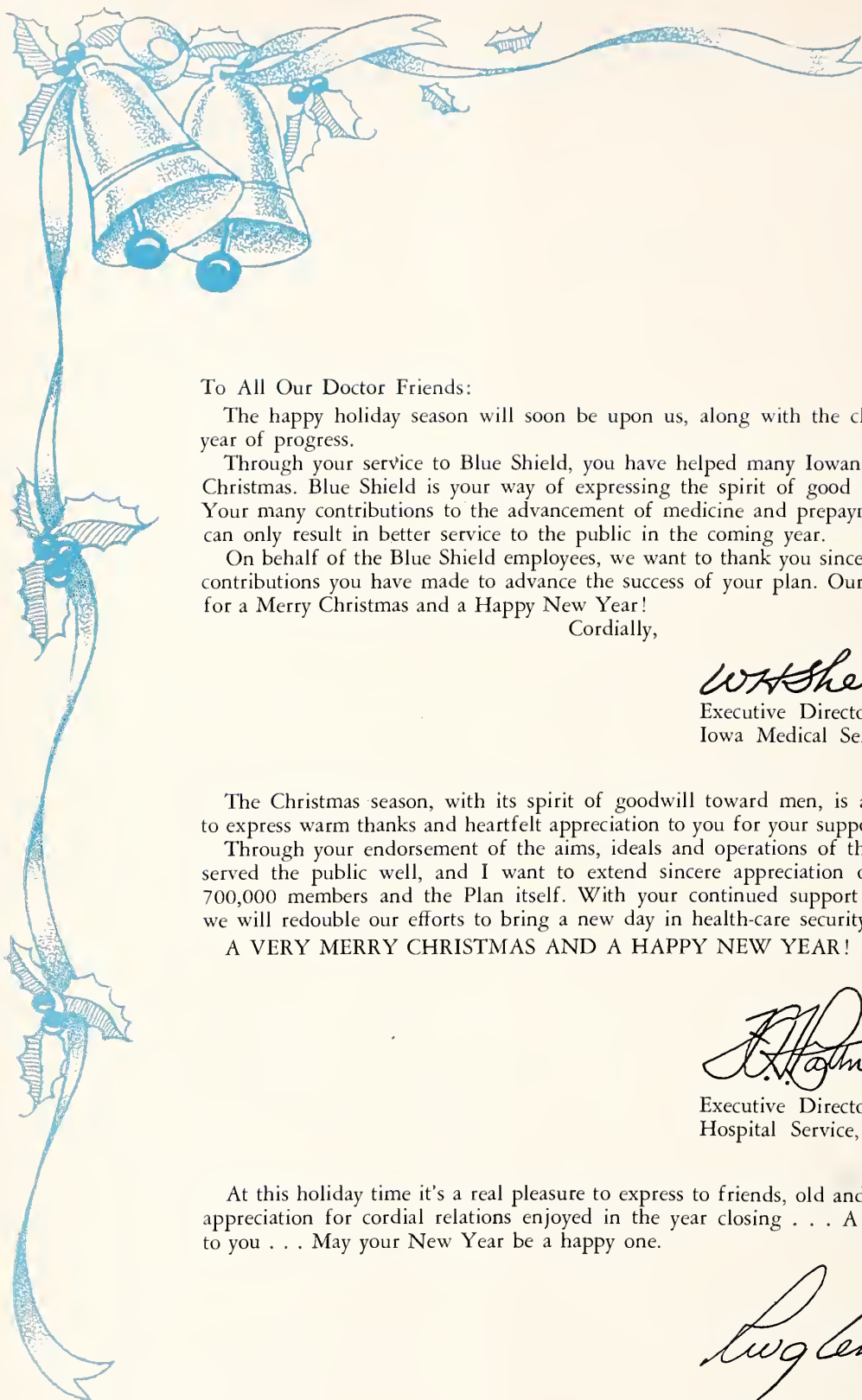
YOUR FINANCIAL PROGRAM

You should keep currently and accurately aware of your financial progress, both in your practice and in your personal life. You need a monthly report to provide this picture for you, and should study it carefully and regularly before making any decisions.

Second, you need expert counsel. No man can be informed on all subjects. While you might be particularly interested in some phase of your business problems, you simply haven't the time to accumulate the experience and knowledge to assure you of right decisions in all matters. You will be wisest to seek advice from those whose experience and training best qualify them to guide you.

Then, with adequate information and counsel, you can begin to set up a financial program that will best serve the interests of your patients, your family and yourself. In subsequent articles, we shall discuss the ten most important factors to be considered in this program.

* General Manager, Professional Management.



To All Our Doctor Friends:

The happy holiday season will soon be upon us, along with the closing of another year of progress.

Through your service to Blue Shield, you have helped many Iowans enjoy a merrier Christmas. Blue Shield is your way of expressing the spirit of good will toward men. Your many contributions to the advancement of medicine and prepayment health plans can only result in better service to the public in the coming year.

On behalf of the Blue Shield employees, we want to thank you sincerely for the many contributions you have made to advance the success of your plan. Our very best wishes for a Merry Christmas and a Happy New Year!

Cordially,

W. H. Sherin

Executive Director
Iowa Medical Service

The Christmas season, with its spirit of goodwill toward men, is a wonderful time to express warm thanks and heartfelt appreciation to you for your support of Blue Cross.

Through your endorsement of the aims, ideals and operations of the Plan, you have served the public well, and I want to extend sincere appreciation on behalf of our 700,000 members and the Plan itself. With your continued support and cooperation, we will redouble our efforts to bring a new day in health-care security to every family.

A VERY MERRY CHRISTMAS AND A HAPPY NEW YEAR!

J. H. H. H. H.

Executive Director
Hospital Service, Inc., of Iowa

At this holiday time it's a real pleasure to express to friends, old and new, our sincere appreciation for cordial relations enjoyed in the year closing . . . A Merry Christmas to you . . . May your New Year be a happy one.

L. W. Glenn

President
Associated Hospital Service, Inc.

MENTAL ILLNESS

EARLY SCHIZOPHRENIA

One out of every four of our hospital beds is occupied by a patient who suffers from schizophrenia. When one realizes the gravity of this situation, he sees the necessity for our being alert to the possibility of schizophrenia's occurring in children or in adolescents who present definite behavior problems.

There is no difficulty in establishing a diagnosis of schizophrenia when the patient is actively hallucinated, exhibits very bizarre mannerisms and is going through gyrations that label him as psychotic. The problem arises in the early or incipient schizophrenic, however. It is important that one establish a diagnosis as soon as possible, for although there is an 80 per cent recovery rate during the first year of hospitalization, there is a rapidly diminishing basis for hope thereafter, and at the end of the second year no more than 40 per cent can be expected to recover.

The schizoid youngster is silent and unsociable, taciturn, indifferent, indolent, very frequently jealous, and occasionally quite moody and ill tempered. His relations with his family are disturbing and unsatisfying. He is described as timid, shy, self-conscious and lacking in self-satisfaction. He does not enjoy the rough and tumble games of his contemporaries, and instead of participating in those or other youth activities, he adopts extraordinary means for achieving a sense of security.

In many cases, the incipient schizophrenic is aware of his own deficiencies. He complains of having no aim in life and of not knowing exactly where he fits. This dissatisfaction often leads to panic, in which he correctly complains of fears of becoming ill. On the whole, his behavior represents a faulty reaction to a life situation—a maladjustment in which he is unable to handle the everyday stresses of life. The simple routine of daily living becomes too difficult for him, and his personality disintegrates in an early schizophrenia.

At the outset, the patient has vague feelings of unreality, detachment and lack of spontaneity, and, as a result, he does not attempt to compete with other members of his group. He is unapproachable, and about this time he begins to wonder what people are thinking about his particular activities. His thinking tends to become unrealistic, and he makes no attempt to correct it to conform with either the logic of experience or the demands of the external world. He calls upon fantasy to supply him what real life has denied, and consequently he begins to develop delusions and hallucinations. At this point, however, he is still able to control—and more particularly to cover up—these abnormal manifestations.

Because of the marked discrepancy between his thinking and the realities of the external world, he develops an inhibition of his emotional reactions which later becomes one of the classical features of all schizophrenics—that is, a shallowness and an inappropriateness of his emotional reactions.

By this time, you have seen that such a patient can be helped, for treatment is available, and the pattern of behavior which this individual is using to satisfy his needs can be modified so that he can resume living a normal life. However, if allowed to persist in this type of behavior without benefit of therapy, like the majority of other schizophrenics, he will spend the remainder of his life occupying one in four of our hospital beds.

Iowa Academy of General Practice

(Continued from page 586)

is unfair to the one being called, regardless of who it may be.

Fifth. Fees should be discussed beforehand, whenever diagnostic aids or treatments will involve more than very ordinary expense. Consultations, extra laboratory work, X-rays and expensive prescriptions are all in this category. If you have told your patient the reason for the extras, and have forewarned him of the additional cost, he won't complain.

Sixth. Business methods should be standardized. The public complains about the doctor's bills, the way he sends them, the form he uses or the time of month they arrive, much as the doctor himself complains about the department store bill, the grocery bill, the drug bill or the garage bill. Probably the most important step in the right direction is for the doctor to itemize his statements. There are different ways in which he can do this, but his objective should be to let his patients know just what they are each being charged for. A large percentage of complaints that come to Mediation Boards concern fees.

Seventh. In this day of insurance of all kinds, the doctor needs to help his patients with their claims. Many agents do not understand the policies they sell; some of them perhaps don't want to do so. Policyholders are even more poorly informed. If you take time to find out what coverages the patient has and to explain them to him, the patient will be better disposed toward you, and toward voluntary health insurance in general, than he would be if you left him to discover the shortcomings of his insurance when he received your bill. Most of the time, the quicker policyholders' forms are completed, the quicker the doctor is paid. If possible, have the patient sign an authorization for the company to pay you direct. And remember to boost Blue Shield, for it is still the best insurance.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

GROWTH AND DEVELOPMENT OF CHILDREN, by *Ernest H. Watson, M.D., and George H. Lowrey, M.D.*, Second Edition (Chicago, The Year Book Publishers, Inc., 1954. \$7.00).

THE YEAR BOOK OF OBSTETRICS AND GYNECOLOGY (1954-1955 Year Book Series), ed. by *J. P. Greenhill, M.D.* (Chicago, The Year Book Publishers, Inc., 1954. \$6.00).

UROLOGY, by *Meredith Campbell, M.D.*, with the collaboration of 51 contributing authorities. 3 vols. (Philadelphia, W. B. Saunders Company, 1954. \$60.00).

INTERNS MANUAL (Cook County Hospital), by *Arthur Bernstein, M.D.* (Chicago, The Year Book Publishers, Inc., 1954. \$3.00).

BOOK REVIEWS

RHEUMATIC FEVER, by *Lowell A. Rantz, M.D.* (First issue of DISEASE-A-MONTH, The Year Book Publishers, Inc., Chicago. Annual Subscription \$9.00).

Clinical monographs dealing with a single medical problem are not new in medical journalism, but this publication introduces a different approach to the task of keeping the busy practitioner abreast of current developments. Monthly, on an annual subscription basis, the publishers propose to issue a digest-sized booklet of 30 to 40 pages by a recognized authority in the field under discussion. Projected for the remainder of the first year's issues are monographs on urinary tract infections, gastrointestinal bleeding, heart failure, arterial hypertension, renal failure, hepatitis, thyrotoxicosis, bronchial asthma, coronary artery disease, diabetes mellitus and the anemias.

The first article, on rheumatic fever, represents the results of Dr. Rantz's studies with the Army epidemiological board from 1943 to 1946, and his subsequent investigations on the pathogenesis of the disease. He makes a strong case for acceptance of the theory that group A hemolytic Streptococci are etiologically responsible for rheumatic fever. Somewhat surprising in his observation that in the last 20 years the disease has declined in severity and, probably, in frequency. He ventures the prediction that "the continuing barrage of antibiotics given for all types of respiratory infection may eventually eliminate the hemolytic Streptococcus as a significant cause of illness," and that in that segment of the population receiving complete medical care, the next 20 years may see rheumatic valvular heart disease become an uncommon childhood difficulty.

There is a concise but complete discussion of the clinical picture during both acute and late phases of rheumatic fever. Laboratory tests are carefully evaluated as a diagnostic aid, with emphasis on the antistreptolysin O titer to exclude rheumatic fever, rather than as a positive piece of evidence. Treatment is dealt with rather briefly, the author concluding that to date the corticosteroids have not proved superior to salicylate therapy when properly used. —*H. J. Smith, M.D.*

GERIATRIC NURSING, by *Kathleen Newton, R.N., M.A.*, Second Edition. (St. Louis, C. V. Mosby Company, 1954. \$4.75).

This small book has accomplished its author's aim in pointing up the importance of nursing and related care for the aged, a problem which is causing increasing concern for all thoughtful persons. While essentially a handbook for the nursing profession, it is non-technical enough to be read by laymen faced with the problem and readable enough to be interesting and profitable for the physician.

Miss Newton quite properly and in a very satisfactory manner has discussed the emotional needs of older people in about one-third of her book, without lapsing into the jargon of either psychiatry or sociology. The thinking is oriented somewhat toward the situations of urban life rather than toward those of a predominantly rural state such as Iowa. —*J. E. McFarland, M.D.*

THE 1954-1955 YEAR BOOK OF MEDICINE, ed. by *Paul B. Beeson, M.D., Carl Maschenheim, M.D., William B. Castle, M.D., Tinsley R. Harrison, M.D., Franz J. Ingelfinger, M.D., and Philip K. Bondy, M.D.* (Chicago, The Year Book Publishers, Inc., 1954. \$6.00).

The 1954-1955 Year Book of Medicine, like its predecessors, is a masterful condensation of the important contributions to the world literature in the field of internal medicine during the past year.

The editors have used excellent discretion in their selection of articles, and the perspective added by the editorial comment makes for the most profitable and rewarding reading this reviewer knows of.

The progress in infectious disease, antibiotics, cardiovascular disease, hematology, endocrinology and other aspects of internal medicine is so rapid and the time required to read all the original articles so excessive that this book seems a must for the well-informed internist. —*Charles H. Gutenkauf, M.D.*

TEXTBOOK OF PEDIATRICS, ed. by *Waldo E. Nelson, M.D.* (Philadelphia, W. B. Saunders Company, 1954. \$15.00).

Again the latest edition of this classic textbook of pediatrics meets the expectations of the student and the practicing physician. Dr. Nelson, with seventy collaborating contributors, continues the fine traditions of the Griffith, Griffith-Mitchell, and Mitchell-Nelson series of textbooks in pediatrics.

The illustrations, figures and tables presented with the text add much to the book. One table that should serve as a handy reference concerns selection of diagnostic microbiologic specimens for many types of disease states.

The reader must realize that the time involved in putting such a textbook to press precludes the absolute last-word data in the fast-moving developments in medicine. Nevertheless, this edition is very well in line with present day thinking. —*M. E. Alberts, M.D.*

MEDICAL HISTORY



The First Seventy Years of the Linn County Medical Society

A Digest of a Manuscript Written in 1932 by

FRANK S. SKINNER, M.D.

MARION

In 1932, Dr. Frank S. Skinner, of Marion, wrote a history of the Linn County Medical Society and of other and shorter-lived organizations of physicians that competed with it during the late 1800's and at the turn of the century. His unpublished manuscript contains lists of the Society's guest speakers, which, however eminent the men may have been, need no longer usurp our attention, but his account of the Linn County group's early struggle for life is of some interest in itself, and his review of the issues with which it was concerned serves to remind us that Medicine's battle against socialism has been going on for a very long time. Besides, it demonstrates that patriotism and public-spiritedness were outstandingly characteristic of doctors before many of us were born.

IOWA UNION MEDICAL SOCIETY

The Linn County Medical Society was first organized in 1859, at Mt. Vernon, by Drs. Love, Ely, Ristine, Carson and Lyon. Its meetings were suspended during the War Between the States, but were revived in 1866. In 1873, its name was changed to the Iowa Union Medical Society, and as such it drew its membership not only from Linn, but from Jones, Jackson, Cedar, Johnson and Benton counties. Scientific sessions were held twice a year, at which papers were read and interesting cases were presented for study and discussion.

At that time, long before the automobile and when roads in Iowa were at times impassable, many of the doctors who attended underwent hardships to do so. But they were seeking advancement in their chosen work through the interchange of views and information about the therapies common to medical science at that time. There were no blood tests or other laboratory procedures and no x-ray for them to use in diagnosis. Decisions in that area rested entirely on the cleverness and ability of the individual examiner and his consultants. As years passed, Dr. Skinner says, there developed a loyalty to the Iowa Union Medical Society which resulted in

opposition to the AMA's plan for making individual counties the basic units of an organization that could function through each state society and thus increase the strength of the national Association.

NEW ORGANIZATION

To implement the expressed wishes of the AMA, however, Dr. G. E. Crawford, of Cedar Rapids, councilor for what was then the Fifth Congressional District, issued a call to Linn County physicians, and an organizational meeting was held on September 1, 1903. It was decided that the members of the Iowa Union Medical Society resident in Linn County be accepted as members of the new group and that the names of other candidates be deferred until a permanent organization could be effected.

At that same meeting, the newborn Society took a stand on one of the burning medical issues of that day by writing the following passage into its Constitution and By-Laws: "No member of this Society shall enter into any contract or agreement to render professional services to individuals or families or the members of any society or fraternity or lodge or corporation for any stipulated amount for any given time other than the customary rates charged by the members of this Society for like services actually rendered, excepting salaried appointments in public institutions." Thus Medicine's stand against socialistic tendencies in the health field was initiated, so far as Cedar Rapids and its environs were concerned. This policy, Dr. Skinner reports, was adopted without a dissenting vote, in an effort to prevent local chapters of lodges and other such brotherhoods from securing medical service on a contract basis. The fee bill of the Iowa Union Medical Society was adopted as a guide to members in charging for their professional services.

First officers of the Linn County Medical Society included Ward Woodbridge, M.D., Central City, president; G. R. Skinner, M.D., Cedar Rapids, vice-president; H. W. Bender, M.D., Cedar

Rapids, secretary; the author of the history, F. S. Skinner, M.D., treasurer; and J. W. LaGrange, M.D., Marion, John Hamilton, M.D., Cedar Rapids, and A. H. Johnson, M.D., Cedar Rapids, censors. Dr. G. R. Skinner was named delegate to the Iowa State Medical Society.

In addition to the men already named, the charter members of the Society included G. E. Crawford, M.D., G. P. Carpenter, M.D., H. L. Walker, M.D., Richard Lord, M.D., F. G. Murray, M.D., J. R. Jesinski, M.D., Emma Neal, M.D., Oldrich Krejsa, M.D., John C. Petrovitsky, M.D., Chester Hubbard, M.D., Mary S. Webb, M.D., A. B. Coulter, M.D., W. J. Morrison, M.D., A. B. Poore, M.D., S. S. Spicer, M.D., H. S. Raymer, M.D., W. J. Bradley, M.D., John Ristine, M.D., Mary L. Neff, M.D., W. Ruml, M.D., G. C. Skinner, M.D., and J. Lynn Crawford, M.D. (from Cedar Rapids); G. L. Carhart, M.D., and F. L. Sargeant, M.D. (from Marion); J. A. Lee, M.D., Jacob F. Meyers, M.D., Edwin Burd, M.D. (from Lisbon); J. S. Love, M.D., J. B. Graham, M.D. (from Springville); and W. J. Netolicky, M.D. (from Western College). Dr. Skinner says that the above list is incomplete, but that no other was available to him when he wrote his account.

The dues for the new Society were three dollars, of which two dollars was remitted to the State Society.

HARD TIMES

Because membership in the State Society was available only to members of officially recognized county groups, enrollment in the Linn organization became fairly high almost immediately, but attendance at its meetings stayed low because of the doctors' continued loyalty to the regional group. Out of a total of 57 members, the average attendance was 24.

At the program presented on September 13, 1905, a paper was read on a case of appendicitis treated by the Ochsner method, with recovery of the patient. Through a misinterpretation of Dr. Ochsner's statements, the use of the ice-cap in acute appendicitis had been heralded as a non-surgical treatment for all cases. Discussions were frequent and often heated, Dr. Skinner relates, and many patients who lived far away from the nearest hospital were so treated, some of them, of course, with at least temporary success.

The advisability of chemical analysis of drinking water occupied at least part of the attention of the Society at that time, and it went on record as recommending that all private wells be tested. But socialism, it seems, had again reared its ugly head. Linn County Medical Society memorialized the Board of Regents of the State University of Iowa as follows: "First, that all persons, before being admitted to the Hospital or Clinics of either of the Medical Departments of the Iowa State University, be required to furnish from the Township Trustees of their place of residence, a cer-

tificate showing that they are unable to pay for such professional attendance, either medical or surgical as their condition may require; second, that no person in the employ of the State of Iowa shall receive any fee or other compensation for any consultation, treatment or surgical operation rendered or performed in any Hospital or Institution belonging to the State of Iowa."

In 1906, the following resolution was adopted: "Resolved: that we encourage the examination of the milk supply of the City of Cedar Rapids, believing that a regular chemical and bacteriological examination of the milk will accomplish the following results: A. prevent fraud in the sale of milk; B. greatly diminish sickness and fatality among children; C. will be the means of helping to eradicate the ravages of tuberculosis." In response, the city council formally expressed its appreciation of the Society's work in protecting the public health.

But despite these commendable activities, the Linn County Medical Society failed to flourish. Its membership declined somewhat, and attendance at its meetings was so poor that adjournments became necessary for lack of a quorum. The importation of guest speakers was undertaken for the first time, partially at least for the purpose of stimulating interest.

In January, 1907, plans were being made for the entertainment of the State Society in Cedar Rapids, and the officers circularized the membership to plead for a full attendance at the regular March meeting that was to precede the state gathering. But only 20 doctors showed up. Dr. Skinner fails to mention whether or not that apparent lack of enthusiasm among the hosts-to-be resulted in poor entertainment for the physicians from other parts of the state. But he relates that a committee was subsequently appointed to consider whether more frequent meetings might be an answer to the organization's problems. The answer brought back was "No." If more meetings were scheduled, the committee reasoned, they would conflict with the sessions of a newly formed medical group, the Cedar Rapids Practitioners Club. In consequence, nothing was done, but, surprisingly, inaction brought results. The Practitioners Club had only a short life (Dr. Skinner offers the perhaps biased opinion that "it accomplished very little good.") and the Linn County Medical Society survived.

Also in 1907, through its Committee on the Suppression of Quackery, the Society tried unsuccessfully to prosecute a rather prominent faker who was doing considerable business. Dr. Skinner's manuscript reviews no details of the dodge that the defendant was accused of working. Rather, it emphasizes the principle on which the grand jury refused to bring in a true bill against him. Dr. Skinner must have been a witness for the state, for he assures his readers he found out

at first hand that the jurors were willing to consider no question other than one: "Did he do any good?"

In 1909, the Society entered into a negotiation with county authorities regarding medical care for indigents that was destined to drag out for about 20 years. At much the same time, it undertook a program of public education on the cause, prevention and cure of tuberculosis. Members of the Society lectured to various groups at intervals throughout 1910 and 1911, and they inspected and endorsed the new state hospital that had been erected at Oakdale.

BETTER DAYS

During 1912 and 1913, hard times for the Society came to an end. The Iowa Union Medical Society still held meetings, but enthusiasm for it was waning, and a short time later it expired. Dr. Skinner was not inclined to throw stones at the Iowa Union. In fact he pays tribute to it for having filled a need for postgraduate education at the turn of the century, but since it failed to fit into the AMA's scheme of things and interfered with the prosperity of the county group with which he had chosen to identify himself, he certainly seems not to have mourned its passing. At about the same time that the old society died, the Linn County Society had hit upon the time-honored device of serving refreshments as a means of bolstering attendance at its meetings. Buffet lunches and smokers were provided at the expense of a committee, the membership of which, necessarily, rotated. "These social hours were a means of bringing the members of the Linn County Medical Society into a closer fellowship," Dr. Skinner tells us.

Beginning in 1914, the Society made rapid strides toward functioning as Dr. Skinner believed a medical organization should. It was growing rapidly, attendance at meetings ranging from 95 to 110, it was taking an interest in national events and issues, as well as in local ones, and was concerning itself more and more single-mindedly in the welfare of the medical profession. At about that time, the Harrison Uniform Narcotics Act was evoking considerable discussion. The papers presented at scientific meetings embraced all branches of medicine, surgery and the specialties, and the speakers were men of prominence and marked ability who were brought from outside the state, as well as from elsewhere in Iowa.

THE WAR YEARS

At the June, 1917, meeting, following the entrance of the United States into World War I, the subjects for discussion were military medicine and surgery. Everywhere the influence of the great conflict was paramount. On August 8, 1917, a special meeting was called so that the Society could accept the resignations of its president and

secretary, who were about to enter government service for the period of the war. The Society subsequently had 14 of its members in active service: Drs. R. C. Alt, H. R. Conn, G. C. Bair, W. E. Brown, C. E. Aborn, C. H. Cogswell, Jr., J. E. Stansbury, B. R. Johnston, G. C. Skinner, R. E. Munden, R. A. Vorpahl, A. R. Zuercher, F. G. Murray, R. K. Keech, S. B. Rybolt and J. G. Gardner. Other doctors engaged in war work at the local level or worked for the federal government out of uniform. Dr. Skinner says, "I do not know of any other line of business that gave so much, without thought of financial returns."

During the rest of the year 1917 and until the latter part of 1919, there was very little progress made in medical society work at Cedar Rapids and thereabouts. The subjects discussed at meetings were, for the most part, the serious influenza epidemic, disease carriers in general and allied matters of prophylaxis. Many special meetings were called on matters pertaining to war work that needed the cooperation of the Linn County Medical Society, but many members were absent or were busy with special duties, and it seemed impossible for the membership to settle down to any routine scientific study. Scientific sessions were held, and their quality continued high, but they were infrequent.

On January 13, 1920, the first of a series of joint meetings of the Linn County Medical Society and the local Dental Association was held to consider the mutually interesting problem of focal infections. Negotiations with the county government on the financing of medical care for the indigent were resumed, but no conclusion was agreed upon. Guest speakers addressed the Society that year on topics such as carcinoma of the breast, borderline cases, intracranial pressure, small renal and uretral calculi, Hirshsprung's disease, blood transfusion, diagnosis of abdominal lesions, insulin, skin infections, prostatic disease and hospital standardization. But declining interest apparently had once more begun to beset the organization. Attendance at meetings was down, perhaps merely because doctors had got out of the habit during the busy years of the war.

SUCCESS

The period from September, 1924, to September, 1932, Dr. Skinner remembered as one of the best in the Linn County Society's history. Perhaps the fact that, as he wrote his account, that period was freshest in his mind may have influenced his evaluation. But he singles out a discussion by Dr. McKimm Marriott on lactic acid feeding of children and a skin clinic conducted by Dr. Richard L. Sutton as two of the scientific sessions that he and his fellow members wouldn't soon forget. It was at that time also that the Soci-

(Continued on page 602)

STATE DEPARTMENT OF HEALTH

Edmund G. Jennings
COMMISSIONER

IMMUNIZATIONS FOR OVERSEAS TRAVEL

Since the State Department of Health frequently receives requests for information regarding immunizations for travel abroad, the following summary has been prepared from the last bulletin issued by the Office of International Health.

The local physician can do any of the immunizations except the one for yellow fever, which, because of the great difficulty of maintaining a potent vaccine, is given only at the port of embarkation, at a U. S. Marine hospital or at other stations operating under special supervision.

International Certificates of Vaccination. These are usually procured from the office to which the traveler makes application for a passport, i.e., the office of a Clerk of Federal Court or State Court authorized by law to naturalize aliens. Information as to which immunizations are required for travel to a particular country can usually be obtained from the Passport Division of one of those offices.

Smallpox. A valid certificate of vaccination against smallpox is recommended before travel to any foreign country and is always required for entry into the United States, except from Canada and a few other neighboring countries. The small-

pox vaccination certificate is valid for a period of three years, beginning eight days after the date of a successful primary vaccination or on the date of revaccination. Observe and record the reaction on the third and ninth days. If yellow fever inoculations are to be given, they should be given at least five days before smallpox vaccine is given.

Cholera. Start immunizations at least two to three weeks before the individual is to leave the United States. The standard course is two injections at a seven to ten day interval. A third injection is advisable. The cholera vaccination certificate is valid for a period of six months, beginning six days after the first injection of the vaccine, or on the date of reinoculation within such period of six months.

Typhus. Begin inoculations two to three weeks before the person is to leave the country. The standard course is two doses separated by a seven to ten day interval. Although the certificate is valid for one year, a booster dose is recommended at six months if the danger of typhus is still present.

Yellow Fever. Rather than spend several days at their port of embarkation, many travelers would prefer to go to their nearest U. S. Marine

City	Station	Time	Telephone
Los Angeles, Calif.	U.S.P.H.S. Outpatient Clinic, 406 Federal Bldg.	Mon.-Fri. 1:30-2:20 p.m.	Madison 5411, Ext. 100
San Francisco, Calif.	U.S.P.H.S. Hospital 15th Ave. & Lake St.	Tues. & Thurs. 1-3 p.m. (ex. hol.) by appointment	Skyline 2-1400, Ext. 235
Miami, Florida	U.S.P.H.S. Outpatient Clinic, 365 Federal Bldg.		9-5431, Ext. 64 or 59
Savannah, Georgia	U.S.P.H.S. Hospital York & Abercorn Sts.	Mon. & Fri. 8:30-4:30	3-5783
Chicago, Illinois	U.S.P.H.S. Hospital 4141 Clarendon Ave.	Mon. & Fri. 9:45 a.m. (ex. hol.)	Lakeview 5-6340
New Orleans, La.	U.S.P.H.S. Hospital 210 State Street	Tues. 3:00 p.m. Fri. 11:00 a.m.	Tyler 3441
Baltimore, Md.	U.S.P.H.S. Hospital Wyman Park Dr. & 31st	Tues. 10:00 a.m.*	Belmont 5-3930
Boston, Massachusetts	U.S.P.H.S. Hospital 77 Warren Street	Friday 9:00 a.m.-12:00 m. by appointment	Stadium 2-3400
Minneapolis, Minn.	Students' Health Serv. Univ. of Minnesota		Main 8158, Ext. 168
Kansas City, Mo.	Trans-World Airlines, Inc. 10 Richards Road	Mon.-Fri. 8:00-5:00 (ex. hol.)	Norclay 4400
New York City	U.S.P.H.S. Outpatient Clinic 67 Hudson St.	Mon.-Fri. 2-3 p.m. (ex. hol.)	Barclay 7-6150
Cincinnati, Ohio	12th St. Health Center 212 W. 12th St.	Wed. 9:30 by appointment only	Cherry 7676
Brownsville, Tex.	U. S. Quarantine Station Internat. Br. & 14th	Thurs. 9 a.m.- 12 m.**	Bro. 2-4511
Ft. Worth, Tex.	Dept. of Public Health 308 E. Fourth St.	Thurs. 10-11 a.m.	FO 8341

* Group of 5 can be taken any weekday morning.

** Group of 3 can be taken any morning, Mon.-Fri.

hospital or other approved station for the inoculation. Some of them are tabulated below. Only one injection is required, but it must be secured at least ten days before the person leaves the country. The certificate becomes valid on the eleventh day, and remains so for six years. Travelers who, within six days of their arrival in the United States or other countries, have come from or passed through an area that is considered infected with yellow fever are required to present a valid certificate of inoculation against the disease.

Typhoid and paratyphoid. The standard course of three inoculations, with a seven to ten day interval between, should be taken by every person traveling abroad. Annual boosters should be taken.

Diphtheria. Children under 15 who go abroad should be immunized against diphtheria. For travel in some areas of high diphtheria incidence, adults up to the age of 35 should be immunized if their Schick tests are positive.

Due to severity of reaction of older persons to the alum precipitated materials, persons over ten years should be given the purified diphtheria toxoid, rather than the alum precipitated toxoid.

Stamps and seals. These are required for smallpox and cholera inoculation certificates. After the physician's data have been entered, the certificate must be authenticated by any one of the following stamps or seals:

The stamp or seal of the state or local health department of the area in which the physician practices.

The stamp approved by the U.S.P.H.S. and assigned to certain of its physicians.

The impression seal of the U.S.P.H.S. or the stamp of the Department of Defense.

TUBERCULOSIS REMAINS A HEALTH PROBLEM

"If you think tuberculosis in Iowa is licked, you are mistaken."

A letter beginning thus went into some 600,000 Iowa homes late in November carrying the traditional Christmas Seals sold by the Tuberculosis Association.

To back up this statement, the Iowa Tuberculosis and Health Association has this to say about the disease in this state during 1953:

- 744 new cases were reported, for a new-case rate of 28.5 per 100,000 population.
- 1,522 tuberculosis patients were under care, for a patient rate of 58.73 per 100,000 population.
- 125 deaths from tuberculosis occurred, for a death rate of 4.8 per 100,000 population.¹

Another fact is found in Loren E. Chancellor's review, "A Statistical Viewpoint of New Tuberculosis Cases," wherein a three year summary of new cases reported to the Iowa State Department of Health during 1951-1953 shows 2,345 new cases of tuberculosis, for a three-year new case rate of 29.8 per 100,000 persons.²

During the same three years, there have been 3,051 patients under care in state or county sanitarium, in the tuberculosis wards of VA hospitals and in the six mental hospitals in the state. This is a patient rate of 115.34 per 100,000 for three years.

Iowa had 186 tuberculosis deaths in 1951 and 181 in 1952. Iowans can cite the 125 tuberculosis deaths in 1953, with a death rate of 4.8, a record that continued to make the state one of the lowest tuberculosis death rate areas, as a hopeful indication. It is gratifying to know that fewer people are dying of the disease and that it can now be treated effectively, a development which is permitting patients to return to productive places in society.

The falling death rate no longer serves as an indication of the lessening seriousness of the tuberculosis problem, however. The number of new cases reported has taken no such dramatic plunge.

During the last three years, there have been more than 2,000 new cases of tuberculosis reported; there have been more than 3,000 patients under some form of treatment, and there have been nearly 500 deaths from the disease. It would seem evident that tuberculosis is not "licked" in Iowa.

Limited tax funds supporting the Tuberculosis Division of the Iowa State Department of Health,

1. Tuberculosis in Iowa—1953. Statistical chart of the tuberculosis problem by county. Published annually by the Iowa Tuberculosis and Health Association, 2124 Grand Avenue, Des Moines 12.
2. Chancellor, Loren E., A statistical viewpoint of new tuberculosis cases. Des Moines, Iowa Tuberculosis and Health Association, 1954.

MORBIDITY REPORT

Disease	Oct. 1954	Sept. 1954	Oct. 1953	Most cases reported from these counties
Diphtheria ...	3	0	0	Woodbury 3
Scarlet Fever ..	41	9	38	Buena Vista, Des Moines, Henry
Typhoid Fever	1	4	2	Woodbury
Smallpox	0	0	0	.....
Measles	71	84	87	Des Moines, Linn, Scott
Whooping Cough	47	36	45	Dubuque, Polk, Scott
Brucellosis ...	24	22	24	Black Hawk 3, Boone 2, Johnson 2, Wapello 2, others scattered—1 to a county
Chicken Pox ..	83	26	149	Buena Vista, Hardin, Polk, Woodbury
Meningococcus				
Meningitis ..	5	4	1	Henry 1, Polk 3, Woodbury 1
Mumps	100	133	104	Black Hawk, Cerro Gordo, Des Moines, Greene
Poliomyelitis	266	446	69	Black Hawk, Polk, Scott, Story
Infectious Hepatitis ...	134	174	149	Black Hawk, Jackson, Marion, Plymouth
Rabies in Animals	20	14	14	Woodbury 2, Wright 2, others scattered—1 to a county
Tuberculosis	42	50	91	For the state
Syphilis	150	118	188	For the state
Gonorrhea	94	61	71	For the state
Encephalitis ..	2			Pottawattamie

together with public contributions to the Christmas Seal Sale have made possible case-finding programs bringing to light many of these new cases.

There must still be pockets of infection—active undetected cases of tuberculosis—in nearly every community in Iowa, for new cases, patients, and deaths come from all of the 99 counties in the state.

Tuberculosis is not yet so rare as smallpox, typhoid fever or diphtheria. Since the public is being educated to expect a chest X-ray as a part of a complete physical examination, there is a real possibility that the family physician can find enough clinical and X-ray symptoms of tuberculosis to lead to the discovery and reporting of the foci of infection.

OXYGEN AND RETROLENTAL FIBROPLASIA

Even though a great deal more work needs to be done on the etiology of retrolental fibroplasia, it was the unanimous opinion of the panel assembled to discuss the subject at the recent meeting of the American Academy of Ophthalmology and Otolaryngology that routine administration of oxygen to small premature babies should be discontinued, that it should be given only if there is cyanosis or respiratory disease, that in such instances the concentration inside the incubator should be kept below 40 per cent, as measured by an oxygen analyzer, and that oxygen therapy should be discontinued as soon as respiratory distress has been relieved. The complete report probably will be published shortly in the *TRANSACTIONS OF THE AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY*.

At the same symposium, studies were reported showing that there appears to be no difference in the survival rate of premature infants on a regime like this, as compared with a group to whom oxygen was freely administered.

Yet, a recent questionnaire to hospitals approved for residencies in pediatrics showed that 70 of 113 still are giving oxygen routinely to all premature babies of low birth weight. Of the 70 giving the oxygen routinely, over one third were giving it in concentrations of 40 per cent or more.

Following is a summary of references concerning the association of high oxygen administration with the occurrence of retrolental fibroplasia.

Crosse and Evans,¹ of Birmingham, England, reported occurrence of six cases of retrolental fibroplasia during period when there was much use of oxygen, but no cases after oxygen administration was curtailed. K. Campbell² reported a similar observation in Melbourne, Australia.

Patz³ reported that seven cases of advanced irreversible RLF occurred among 28 infants receiving high oxygen (65-70 per cent), contrasted with no such cases among 31 infants of the same weight group during the same period who received low concentration of oxygen.

Ashton *et al.*⁴ found that retinal blood vessels of full term kittens were in the same stage of development as those of premature human infants, and found that high oxygen concentrations (60 to 80 per cent) obliterated developing blood vessels in the kitten, following which retinal hemorrhages sometimes occurred, and retinal detachment.

Patz *et al.*⁵ produced ocular lesions closely resembling RLF in newborn kittens, puppies, rats and mice by placing them in 70 to 80 per cent oxygen concentrations; litter mates at room oxygen did not develop such lesions.

Gordon *et al.*⁶ reported ten per cent of 80 infants receiving unscrutinized moderate oxygen developed RLF membranes; later, 35 per cent of 20 infants on unscrutinized high oxygen had such membranes; during a transitional period, oxygen administration gradually was reduced, and 21 per cent of 14 infants had RLF membranes; during the subsequent period, with oxygen concentrations kept below 40 per cent, only two per cent of 97 infants developed RLF membranes. Survival rates were not adversely affected by restriction of oxygen.

Locke⁷ reported that 60 of 160 premature babies who received prolonged oxygen therapy at Lincoln and Presbyterian Hospitals developed acute lesions of RLF; in Montreal, six of 43 premature on unrestricted oxygen developed RLF; later, only minimal oxygen was given in Montreal hospitals with which Locke was connected, and only two cases occurred among 124 infants.

Lanman *et al.*⁸ reported on a controlled study at Bellevue Hospital, where 36 infants received high oxygen (averaging 69 per cent) and 28 low oxygen (less than 40 per cent, and then only for cyanosis). Eight of the infants in high oxygen developed cicatricial RLF; none of those in low oxygen developed the cicatricial stage.

Kinsey⁹ gave a preliminary report on a cooperative study among 18 hospitals with randomized controls. All premature infants weighed less than 1500 Gr. and all were followed ophthalmologically for at least three months. Of 53 infants who received prolonged high oxygen, 25 per cent developed cicatricial RLF; of 245 infants who were in the curtailed group, only six per cent showed cicatricial RLF. Most of the risk of developing RLF seemed to occur by exposures to high oxygen during the first week of life. There was no significant difference in mortality rates of the two groups of infants. A. B. Reese,⁹ chairman of the RLF panel, recommended that routine administration of oxygen to premature babies be discontinued, that it be given only if there is cyanosis or respiratory disease, that in such cases the concentration inside the incubator be kept below 40 per cent as measured by an oxygen analyzer, and that oxygen therapy be discontinued as soon as respiratory distress has been relieved.

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STATEWIDE AWARDS ESTABLISHED

Awards, in the names of Dr. W. L. Bierring and Nurse Frances Brophy, have been established by the Iowa Tuberculosis and Health Association for the purpose of recognizing, respectively, to the physician and to the non-medical volunteer who, it decides, has done most to control tuberculosis. The awards will be annual, and the names of the first recipients will be announced next April. Dr. Bierring is director of the Division of Gerontology, Heart and Chronic Diseases of the State Department of Health, and Miss Brophy spent many years as a public health nurse in Allamakee County and was a national director of Christmas seal sales.

SERVICES AVAILABLE AT STATE HYGIENIC LABORATORY, IOWA CITY

The following is a list of the major laboratory diagnostic services available to Iowa Physicians as of October 1, 1954:

1. Agglutination Tests
 - Brucellosis—human and animal
 - Rocky Mt. Spotted Fever—Typhus group
 - Salmonella Typhoid—Paratyphoid group
 - Trichinosis
 - Tularemia
 - Leptospirosis*****
2. Blood Cultures
 - Anthrax—human and animal
 - Brucellosis
 - Salmonella group (typhoid & paratyphoid)
 - Miscellaneous (fee commensurate with the work involved)
3. Cultures
 - Anthrax—human and animal tissue
 - Brucella—for species identification
 - Diphtheria—swabs
 - Feces—salmonella and shigella group
 - Food poisoning
 - Fungi—Ringworm, Histoplasmosis, etc. Pleural and other body fluids—tuberculosis
 - Saliva—L. acidophilus count for dental caries
 - Spinal Fluid—meningitis, brucellosis, etc.
 - Sputum—pneumococci, tuberculosis
 - Streptococcus sore throat—swabs
4. Smears
 - Fungi and yeasts
 - Gonorrhea
 - Sputum—tuberculosis
 - Vincent's Angina
5. Parasitic Diseases
 - Blood—Thick & thin films for malaria & other blood parasites
 - Feces
 - Urine
 - Sputum
 - Pork tissue—Trichina
 - Toxoplasmosis*****—Sabin or dye test—send tube sterile unpreserved clotted blood
6. Rabies—human and animal
 - Brain smears for Negri bodies
 - Mouse Inoculation Test
7. Animal Inoculation Tests—guinea pigs
 - Anthrax
 - Diphtheria—virulence test
 - Tuberculosis material (\$5.00 fee charged to cover actual cost of two animals and food for six weeks)
8. Serologic and Allied Tests
 - Infectious Mononucleosis
 - Heterophile antibody
 - Syphilis
 - Blood
 - Kolmer complement fixation test—qualitative & quantitative

VDRL test—qualitative and quantitative
Kline standard test—qualitative only
Filter Paper Microscopic (FPM) blood of infants only

Spinal Fluid

Colloidal gold

Kolmer complement fixation test—quantitative

9. Special Complement Fixation Tests* ***
(paired specimens essential, 1st specimen held until 2nd specimen received)

Amoebiasis*****

Coccidioidomycosis

Histoplasmosis

Virus & Rickettsial Diseases

Encephalomyelitis

Eastern & Western equine

Lymphocytic choriomeningitis

Mumps

St. Louis

Lymphogranuloma venereum

Psittacosis

"Q" fever

Rickettsial Pox

Rocky Mt. Spotted Fever

Typhus Fever

Murine

Epidemic

10. Water Analyses (\$2.00 fee)** Specimens fee exempt only when collected by staff of the Iowa State Department of Health in checking sources of illness or health hazards.

Bacterial tests

Chemical tests

Fluoride

Hardness

Iron

Nitrates

Complete chemical analysis:—fee commensurate with work involved.

11. Autogenous Vaccine—furunculosis (\$5.00 fee)

CONTAINERS DISTRIBUTED

Agglutination tests

Diphtheria—swab

Serologic tests for syphilis

Slide container for G.C. smears, malaria & Vincent's Angina

Tuberculosis, sputum and animal inoculation

Special—for immediate use only:—

Blood culture

Feces—Typhoid

Feces—parasitic (2 vial method)

Water

* One specimen taken during acute phase and another 10 days to several weeks later depending on the disease.

** Fee established tentatively due to inadequate legislative appropriation.

*** Date of illness onset, date of specimen collection, contact source if known, whether 1st or 2nd specimen and major symptoms to accompany specimen.

**** Limited to suspected congenital toxoplasmosis and/or mothers of suspected congenital cases.

***** At least two stool specimen results must accompany blood.

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Publications Chairman*, Dexter, Iowa

President—MRS. LESTER R. HEGG, Rock Valley

President-Elect—MRS. CHARLES H. FLYNN, 709 W. 15th Street, Clarinda

Secretary—MRS. ROBERT P. MASON, 5818 Chamberlain Drive, Des Moines 12

Treasurer—MRS. HOWARD H. SMEAD, 3333 Grand Avenue, Des Moines 12

GREETINGS FROM THE PRESIDENT

A blessed Christmas to you all—friends old and new in the work of leadership in community health. Even though the year is near its end, our work as an Auxiliary has only begun. To relate all of the many courtesies extended to me and to your other officers at the many lovely coffees, luncheons and dinners would be an impossibility.

Iowa's doctors' wives are doing a magnificent job of promoting good public relations for the medical profession. Many have declared their desire to be identified with our State Auxiliary; many groups, though small in number, have decided to join hands and meet in order to know each other better. They will glean much information from our state activities and will derive suggestions on projects best suited for their home communities.

Each county is different from every other one, and our state program is planned to cover the needs of them all. Be informed! You can't buy what you learn from active participation in the State and National Auxiliary of the medical profession. Be alert! From all present indications, this is no time for complacency. We must do all we can to help our freedom-loving country maintain what is best in health care.

CHICAGO CONFERENCE

A report of the Chicago Conference of State Presidents and Presidents-Elect, which Mrs. Charles Flynn and I were privileged to attend, will appear in the January issue of the WOMAN'S AUXILIARY NEWS. Watch for it, for there are new and significant trends. Read and reread your WOMAN'S AUXILIARY NEWS, the BULLETIN, TODAY'S HEALTH and your YEAR BOOK. Our new YEAR BOOK is bigger and better than ever, thanks to an efficient and hardworking committee. It will be mailed to new members as soon as they have sent their \$3.00 dues to the State Auxiliary treasurer.

The State Auxiliary program committee is planning an exciting annual meeting, which will be held in Des Moines next April. Read again the convention rules in your YEAR BOOK. Try to bring a good exhibit of your chapter's work for display. It might win state as well as community

recognition, and as an individual, you too might be a prize winner. Are you thinking about the score sheet for achievement awards? See page 30 in the YEAR BOOK.

NURSE RECRUITMENT

The need for more nurses is still a challenge for the Auxiliary. New Future Nurses Clubs are being formed, but we haven't yet begun to exert our full potential. Many small communities still need to learn about our nurse recruitment program. If yours is to be a strong chapter, you should study the areas around you, particularly those which have no resident doctors. Nursing students could come from them.

Have you read about "Operation Christmas"? Be sure that your blue Christmas-gift order blank for TODAY'S HEALTH is sent to the central office in Chicago. You will be a credit to Iowa in your promotion of good health literature if you send the only authorized health magazine to your friends as gifts.

Keep in mind that you and your husband can give to the American Medical Education Foundation Fund, and the sum which you give can be deducted from your income tax. This fund helps our medical schools to remain free from federal aid and socialism.

My final hope for 1954 is that you who are starting your first year as an Auxiliary may find comfort and security in being a part of our great Auxiliary of privileged women.

Happy holidays to you all!

MRS. LESTER R. HEGG
President

To Iowa physicians, their wives and children:

May the meaning of Christmas be deeper,
Its friendships stronger and its hopes brighter
As it comes to you this year.

MRS. CHARLES H. FLYNN
President-elect

BOOST THE BULLETIN

In all of the states this year, great stress will be laid on increasing the number of subscriptions to our quarterly BULLETIN. It carries official programs of the national organization and valuable information on both organizational and health affairs with which every doctor's wife should be familiar.

Knowledge of successful activities of county chapters throughout the United States will be a motivating force toward increased activities in your own Auxiliary.

By working conscientiously together, let us make all of our members BULLETIN conscious. The subscription price is only one dollar per year, and subscriptions may start with any issue—August, December, March or May. It is necessary not only to *boast* of the BULLETIN, but to *boost* the BULLETIN!

MRS. F. B. LEFFERT
State BULLETIN Chairman

CERRO GORDO AUXILIARY REACTIVATED

A Dutch treat dinner at Hotel Hanford, in Mason City on October 27, was the scene of the reactivation of the Cerro Gordo County Auxiliary. Newcomers among the doctors' wives met some of the older residents, and, with the ladies who for some time have been members-at-large of the state Auxiliary, made tentative plans for a "Get-Acquainted Coffee."

Mrs. Soren Westly, Sr. accepted the temporary presidency of the revived county organization, and Mrs. George T. Joyce was made temporary secretary and treasurer.

Guests at the meeting included the state Auxiliary's organization chairman, Mrs. Dean H. King, and two members of the newly organized Wright County Auxiliary, Mrs. S. P. Leimbach, of Belmond, and Mrs. R. L. Gorrell, of Clarion.

WRIGHT COUNTY ORGANIZES

On Friday afternoon, October 15, Mrs. John R. Christensen, of Eagle Grove, opened her lovely home to the doctors' wives of Wright County so that they might hold a meeting there for the organization of a Woman's Auxiliary chapter.

Mrs. Lester Hegg, president, and Mrs. Dean King, first vice-president of the state Auxiliary were present to explain the details of setting up the chapter and to discuss the objectives of Auxiliary work. Another guest, Mrs. James Gannon, of Laurens, Pocahontas County, became a member-at-large of the state group.

After a beautiful tea served from a table decorated in fall colors, six ladies became the charter members of the Wright County Auxiliary. Like other doctors' wives, they all are busy with their

families, church activities, and educational and health projects in their communities, but all felt they could find time for Auxiliary work and felt it was necessary that they do so.

Temporary officers chosen, pending final establishment of the organization in December, included Mrs. Christensen, president; Mrs. R. G. Bird, Clarion, treasurer; and Mrs. R. L. Gorrell, Clarion, secretary. The other charter members are Mrs. M. J. Schaeferle, Eagle Grove, Mrs. E. M. Smith, Eagle Grove, and Mrs. B. L. Basinger, Goldfield. Mrs. S. P. Leimbach, Belmond, Mrs. Charles P. Hawkins, Belmond, Mrs. Robert F. McCool, Clarion, Mrs. Richard W. Smith, Clarion, Mrs. Arlo L. Pitcher, Belmond, and Mrs. Glenn J. Hruska, Belmond, joined subsequently.

DISTRICT MEETINGS

Third

Clay, Sioux, Pocahontas, Palo Alto, Osceola, O'Brien, Lyon, Emmet and Dickinson counties were represented at the third district meeting of the Woman's Auxiliary, held at the First Congregational Church, Spencer, on October 5. The speakers were Dr. Thomas L. Ward, of Arnolds Park, third-district councilor for the Iowa State Medical Society; Mrs. Lester R. Hegg, Rock Valley, state president; Mrs. Elmer Larsen, Centerville, chairman of the state Nurse Recruitment and Loan Fund Committee; and Mrs. Ralph Moe, Griswold, chairman of the state TODAY'S HEALTH Committee. Program and arrangements were provided by Mrs. Dean H. King, Spencer, first vice-president of the state organization, and Mrs. Frank Edington, Spencer, the third-district chairman.

Miss Ruth Kistner, internationally famous flower arranger, from the Reynolds School, New York City, spoke on "Flower Arrangements for the American Home."

Eleventh

Members of the Auxiliary to the Pottawattamie County Medical Society were hostesses to the Eleventh District Meeting held at Club 64, at Council Bluffs, on October 19, 1954. There was an excellent turnout for the meeting.

After being introduced by Mrs. John Krettek, president of the Pottawattamie County Auxiliary, Mrs. Dean H. King, first vice president of the state organization, reported that, with 899 members, Iowa's Auxiliary ranks as twenty-eighth in the nation. She expressed a desire for 100 per cent membership in the future. Mrs. Lester Hegg, state president, stressed the fact that our interests, as doctors' wives, should concentrate upon promoting community health programs and furthering nurse recruitment. She announced that the National Auxiliary Convention is to be held in June, 1955, in Atlantic City, New Jersey.

Mrs. Charles Flynn, president-elect of the state Auxiliary, expressed appreciation for work done by a Pottawattamie County member, Mrs. June Hennessy. Mrs. Flynn said she believes our obligations rank in the following order: (1) home and family, (2) church, and (3) Auxiliary work.

Mrs. Arnold Wirsig, of Shenandoah, Mrs. Ralph Moe, of Griswold, and Mrs. Emil Peterson, of Atlantic, the eleventh-district chairman, also addressed the meeting.

The members who attended appreciated having an opportunity to meet the state officers and committee chairmen.

MRS. W. CLARK GILES

NURSE'S TRAINING LOAN REQUIREMENTS

1. *Acceptance into a recognized school of nursing*, preferably in Iowa or in a border city of a neighboring state, is the initial requirement.

2. *The amount of the loan* shall not exceed the amount of tuition required by Iowa schools of nursing.

3. *Payment of the money* shall be made directly to the school. On recommendation of the school that the trainee is doing satisfactory work and in all probability will finish her course, a small personal loan may be paid directly to the applicant during her second or third year in training.

4. *The scholastic standing* of an applicant for a three- or four-year training course must be in the upper third of her high school graduating class. Of an applicant for a practical nurse's course, this is not required.

5. *Recommendations* must be secured from (a) the superintendent, principal or counsellor of the applicant's high school; (b) two character references; and (c) the president of the county Auxiliary or, in unorganized counties, a member of the Iowa State Medical Society resident in the county.

6. *A picture, 2" x 3"*, similar to a graduation photograph, must be furnished by the applicant.

7. *The applicant must write a theme*, in 50 or more words, explaining "Why I Wish to Become a Nurse."

8. *The applicant must fill out an application blank and sign a note for the amount borrowed*. The note must bear the date of her entry into training, and it must have two co-signers.

9. *The final dates for filing applications* are June 1, for entrance in September, and December 1, for spring classes.

10. *Interest, at six per cent, begins six months following the girl's graduation*.

11. *Repayment of loan and interest*, in monthly installments of \$10.00 or \$20.00, is expected to start as soon as the girl begins employment as a nurse. Larger payments, of course, will be accepted at any time.

Each applicant's file will be dated when all necessary materials have been filed. Each will be

considered in turn, in cases where there are applications for more loans than can be granted.

The Committee feels that the responsibility for the investigation of the girl should rest with the local Auxiliary. It accepts the recommendation of the local group, and feels that its responsibility is limited to seeing that the details of the requirements have been met.

EENT SPECIALISTS' COURSE

Dr. P. J. Leinfelder, professor of ophthalmology at SUI, is to be one of the guest speakers at a University of Minnesota short course for specialists in ophthalmology and otolaryngology, to be held at the Center for Continuation Study on the Minneapolis Campus January 31-February 4, 1955. The other guest speaker in Dr. Leinfelder's field is to be Dr. Frank Newell, associate professor at the Northwestern University Medical School, Chicago. Visiting authorities in otolaryngology will include Dr. Howard House, associate professor at the University of Southern California, and Dr. Peter Pastore, professor at the University of Virginia. Dr. L. R. Boies, director of the Division of Otolaryngology at the University of Minnesota Medical School, is in charge of arrangements.

SPEAKERS' BUREAU SCHEDULES

RADIO

WOI—Ames, Iowa

Thursday at 11:15 a.m.

"Physical Medicine"

December 2 Exercise

December 9 Local Applications of Heat and Diathermy

December 16 Sunlight—Real and Artificial

December 23 Hearing Aids

December 30 Radioactive Substances

WSUI—Iowa City, Iowa

Tuesday at 11:45 a.m.

"Music With Your Meals"

December 7 Nutrition and Health

December 14 Foods We Eat and Where They Come From

December 21 Shopping for Food

December 28 The Champion Breakfast

TELEVISION

WOI-TV—Ames, Iowa

Friday at 9:30 p.m.

December 3 How to Take Care of Your Baby at Home

December 10 Birth Injuries

The television schedule will be resumed after the first of the year.

COUNTY SOCIETIES

MEETINGS

Black Hawk

Dr. Ray Bunge, professor of urology at SUI, addressed the November 16 meeting of the Black Hawk County Medical Society on "Male Infertility."

Cerro Gordo

On November 9, Dr. F. E. Donaghue, of the Mayo Clinic, addressed the Cerro Gordo County Medical Society on "Esophageal Lesions."

At the December 14 meeting, to be held at 6:30 p.m. at Costa's, on Highway 18, west of Mason City, Dr. Bernard Zimmerman, of the University of Minnesota, will speak on "Fluid and Electrolyte Balance, with Particular Reference to the Problems of the Surgical Patient."

Des Moines

The Des Moines County Medical Society entertained Dr. Charles W. Mayo at a dinner preceding his address at the Burlington Birthday Party for the United Nations, October 29.

Johnson

At the November 3 meeting of the Johnson County Medical Society, held at Oakdale Sanatorium, Dr. Hugh M. Wilson, a radiologist at Washington University, St. Louis, spoke on "Problems in Roentgen Diagnosis of Bronchogenic Carcinoma."

Linn

Dr. Louis G. Moench, of Salt Lake City, assistant clinical professor of medicine and psychiatry at the University of Utah, spoke on "Headaches" at the October 14 meeting of the Linn County Medical Society. Dr. Adolph L. Sahs, professor of neurology at SUI, and Dr. Ralph Hunting, Jr., a Cedar Rapids internist, led the subsequent discussion.

At the November 11 meeting, Dr. J. R. Schenken, chairman of the Department of Pathology at the University of Nebraska Medical School, spoke on "Leukemia in Children." His paper was discussed by Dr. W. M. Fowler, professor of medicine, Dr. C. B. May, professor of pediatrics, and

Dr. Margaret Lyman, of the Department of Pediatrics, at SUI.

Page

Dr. John M. Thomas, associate professor of pediatrics at the University of Nebraska, gave a discussion of "Behavior Problems of Children" at the October meeting of the Page County Medical Society.

Polk

At their meeting on December 15, the members of the Polk County Medical Society will be guests of the staff at Mercy Hospital, Des Moines. A guest speaker and a panel will discuss automobile accident injuries.

Sac-Ida

At a joint meeting of the Sac and Ida county medical societies, held in Odebolt on October 14, Dr. Kenneth Keane, a Sioux City orthopedist, spoke on fractures of the hand and wrist. The next such joint meeting is to be held at Early, but the speaker and the date have not as yet been named.

Scott

Professor Arthur A. Leff, who teaches a course in medical jurisprudence at the College of Medicine at SUI, addressed the November 2 meeting of the Scott County Medical Society. Members of the Scott County Bar Association were guests of the Society.

In the election of officers conducted at that meeting, Dr. J. R. Shorey assumed the office of president; Dr. H. M. Hurevitz was chosen president-elect; Dr. T. W. McMeans was named vice-president; Dr. A. B. Hendricks was retained as secretary; and Dr. F. Dale Wilson was reelected treasurer.

Wapello

The guest speaker at the December 7 meeting of the Wapello County Medical Society is to be Dr. James L. Doenges, of Anderson, Indiana, representing the American Association of Physicians and Surgeons.

Woodbury

At the meeting of the Woodbury County Medical Society held at the Mayfair Hotel on November 18, Mr. Millard K. Mills, general manager of Professional Management, Waterloo, spoke on "The Doctor's Fees and the Patient's Finances."

DEATHS

Dr. John T. Dickson, 40, who moved to Fort Dodge late in October to associate himself in practice with the Drs. Kersten, died on October 30, following a heart attack. Burial was at Niagara Falls, New York.

Dr. James Alois Wagner, 73, of Primghar, died in a grade crossing accident near there on the night of October 26. He had practiced in the town for 30 years, and in the area for upwards of 50 years. Since last summer, when he retired, he had been living in Omaha.

Dr. Robert Burns Armstrong, 70, who practiced at Ida Grove from 1919 until 1953, died at Phoenix, Arizona, on October 6.

Dr. Joshua E. Bacon, Jr., 53, of Dubuque, president of the Dubuque County Medical Society, died at Mercy Hospital there following his second heart attack within a year, on October 15. A pediatrician, Dr. Bacon had practiced in the city for 26 years.

Dr. William Clarence Kennedy, 68, of Somers, died there on October 11. He had practiced in the town for 28 years.

Dr. Henry George DeGarzon, 82, of Everly, died at the Cherokee hospital on October 12. He had been in retirement for many years.

Dr. Jean Clements Mendenhall, 68, who until six months ago was a staff member at the Independence Mental Health Institute, died at a hospital in Spencer on October 21, following a cerebral hemorrhage.

Dr. Ivan K. Sayre, 65, of Charles City, died at Iowa Lutheran Hospital in Des Moines, on November 17, of recurrent bleeding ulcer. He was Tenth District Counselor of the Iowa State Medical Society from 1951-1954.

Medical History

(Continued from page 593)

ety first began to exhibit interest in the field of psychotherapy and to invite authorities to speak on it.

After years and years of talk on the subject of medical care for the poor, an agreement on a fair basis of payment was finally concluded by the Society and the Linn County Board of Supervisors. Subsequently, during the Depression, the Society accepted a cut in fees and also expressed the willingness and desire of its members to give medical aid gratis or at reduced rates to the unemployed. In addition, it sent a memorandum to the local Red Cross chapter that it was ready to allocate time and professional service in any major catastrophe that might occur in the vicinity, and without financial compensation its members have cooperated with school boards, parent-teacher associations and other organizations engaged in work of community betterment.

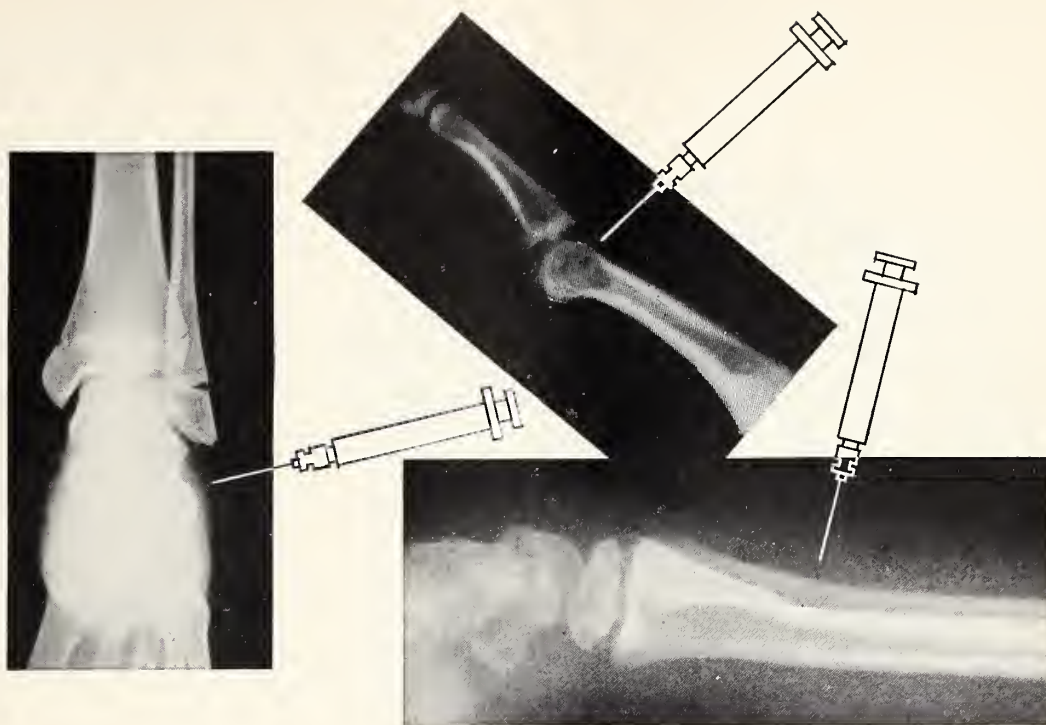
SUMMARY

In his conclusion, Dr. Skinner points out that during the first 70 years of the Linn County Medical Society's existence, typhoid fever, diphtheria, cholera infantum and many other water-borne diseases were brought under control, and that the Society played its part in achieving those victories. In the field of surgery, particularly in appendicitis, gall bladder drainage and removal, and thyroid pathologies, in radiology and in nursing care, great advances occurred, too. Though the Linn County Medical Society did not contribute to those discoveries, the postgraduate education that it facilitated enabled its members to apply those advancements in the treating of patients more promptly than they otherwise would have been able to do.

As for the future, as Dr. Skinner foresaw it in 1932, socialization of medicine constituted the greatest impending danger, not only for doctors but for the public generally. How right he was!

SHORT COURSE IN NEUROLOGY

The University of Minnesota announces a continuation course in neurology to be presented at its Center for Continuation Study, in Minneapolis, February 7-12, 1955. The program, which will be of interest both to general practitioners and to specialists in neurology will include addresses by Dr. G. Milton Shy, of the National Institute of Neurological Diseases and Blindness, Dr. Howard Fabing, vice-president of the American Academy of Neurology, Cincinnati, and Dr. Edward B. Schlesinger, clinical assistant professor of neurosurgery at Columbia University.



Use of Alidase® in Closed Wounds: Contusions, Sprains, Dislocations, Simple Fractures

In traumatic surgery¹ where "definitive treatment . . . is often delayed while the surgeon waits for nature to dispose of hematoma and oedema" Alidase is an efficient means^{1, 2} of accelerating dispersion of accumulated fluids.

Swenson² has described his highly successful results with Alidase in various types of closed wounds. He summarized them as follows:

To remove local fluid accumulations in contusions or bruises, "The usual dose, 500 viscosity units Alidase® mixed in a small amount of normal saline, is injected into the localized fluid. Mixing the hyaluronidase in 1 per cent procaine solution will also produce local vasodilatation, relief of local pain and more rapid absorption of the fluid mass. This method can also be applied to traumatized bursae or synovial spaces which do not respond to repeated aspirations."

The point of maximal pain is infiltrated with 10 cc. of a 1 per cent procaine solution to which 500 viscosity units of Alidase have been added. With this simple technic, a high percentage of successful results has been obtained.

Alidase may be used to advantage to produce more rapidly a short-acting, complete block anesthesia and to facilitate reduction in subluxation or complete dislocations of the interphalangeal joints. When anes-

thesia is required for fracture reduction, local block anesthesia can be simplified by adding Alidase to the anesthetic solution. Alidase also tends to decrease local edema and hematoma formation.

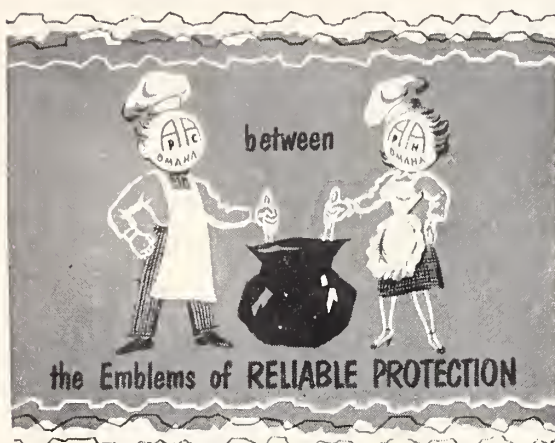
Fluids administered with Alidase are rapidly absorbed from subcutaneous tissue. The simplicity of hypodermoclysis avoids the cumbersome arm board, permits convenient administration with little or no pain or swelling, is vein-sparing and saves nursing time in such conditions as burns, postoperative states, toxemias and parenteral alimentation.

Alidase (brand of hyaluronidase) is supplied in serum-type ampuls of 500 viscosity units. It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. G. D. Searle & Co., Research in the Service of Medicine.

1. MacAusland, W. R., Jr.; Gartland, J. J., and Hallock, H.: The Use of Hyaluronidase in Orthopaedic Surgery, *J. Bone & Joint Surg.* 35-A:604 (July) 1953.

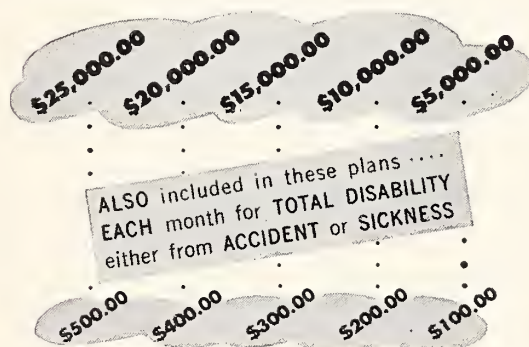
2. Swenson, S. A., Jr.: Minor Surgical Aspects of Closed Wounds, *Am. J. Surg.* 87:384 (March) 1954.

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The Month in Washington

Washington, D. C.—With the change in control of Congress, there naturally will be a major reshuffling of all committees, including those handling medical and health legislation. A new chairman moves to the top, and at the bottom a few Republican members drop off, to be replaced by an equal number of Democrats. In a Congress so evenly divided, domination of this committee machinery is a vital asset.

A majority of the Democrats taking over committee chairmanships in January will be returning to the same jobs they held when their party was in power before, but the situation is a little different on the two committees most important in health and medical legislation. It will be the first time either of these chairmen has had the responsibility of running the full committee, although both have been involved in medical legislation for many years. Both are veteran legislators and are Southerners. They are Senator Lister Hill of Alabama, who replaces Senator H. Alexander Smith of New Jersey as chairman of the Labor and Welfare Committee, and Rep. Percy Priest of Tennessee, who succeeds Chairman Charles Wolverton, also of New Jersey, on the Interstate and Foreign Commerce Committee.

By reason of seniority, Senator James Murray of Montana is in line for the Labor and Welfare Committee chairmanship. However, he has announced that he prefers to run the Interior and Insular Affairs Committee, thus turning over the other chairmanship to Senator Hill. As a sponsor of national compulsory health insurance and as a chairman and member of its committee that held such turbulent hearings on this subject, Senator Murray became well known to the medical profession.

Senator Hill, the son of a physician, has been in Congress for 30 years—14 in the House, before he came to the Senate. He was a co-sponsor of the Hill-Burton hospital construction program, perhaps the most important piece of medical legislation enacted since World War II.

Presumably the Senate committee's Health Subcommittee again will be headed by Senator Herbert Lehman of New York, who handled this task during the last Democratic Congress, the 82nd. Last session, the Health Subcommittee chairman was Senator William Purtell of Connecticut.

Mr. Priest is a former school teacher and newspaperman. He has been in the House for seven uninterrupted terms. In 1951 he was chairman of the Commerce Committee's Health Subcommittee; the subcommittee system was abolished by the committee in 1952. Since then he has taken an

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References: 1. Hollander, F.: Arch. Int. Med. 93:107 (Jan.) 1954
2. Deutsch, E.: Scientific Exhibit, Gastroscopy, Clinical Meeting A.M.A., St. Louis, December, 1953



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- SURGERY**—Surgical Technic, Two Weeks, November 29, 1954, January 24
 Surgical Technic, Surgical Anatomy & Clinical Surgery, Four Weeks, March 7
 Surgical Anatomy & Clinical Surgery, Two Weeks, March 21
 Surgery of Colon & Rectum, One Week, November 29, 1954
 Basic Principles in General Surgery, Two Weeks, March 28
 General Surgery, Two Weeks, December 6, 1954; One Week, February 14
 Gallbladder Surgery, Ten Hours, April 11
 Fractures & Traumatic Surgery, Two Weeks, March 14
GYNECOLOGY—Office & Operative Gynecology, Two Weeks, February 14
 Vaginal Approach to Pelvic Surgery, One Week, February 7
OBSTETRICS—General & Surgical Obstetrics, Two Weeks, February 28
MEDICINE—Two-Week Course, May 2
 Electrocardiography & Heart Disease, Two Weeks, March 24
 Gastroenterology, Two Weeks, May 16
 Gastroscopy, Two Weeks, March 21
RADIOLOGY—Diagnostic Course, Two Weeks, January 3
 Clinical Uses of Radio Isotopes, Two Weeks, April 25
PEDIATRICS—Intensive Course, Two Weeks, April 4
 Clinical Course, Two Weeks, by appointment
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 WILLIAM H. BEIERWALTES, M.D., University of Michigan.
 CARL C. BIRKELO, M.D., Wayne University.
 JAMES W. J. CARPENDER, M.D., University of Chicago.
 CARL L. GILLIES, M.D., State University of Iowa.
 PHILIP J. HODES, M.D., University of Pennsylvania.
 JOHN F. HOLT, M.D., University of Michigan.
 B. V. A. LOW-BEER, M.D., University of California.
 JAMES STOBBER, Physicist, Kelley-Koett X-Ray Corp.

* * * * *

METABOLISM AND ENDOCRINOLOGY

February 24, 25 & 26, 1955

Guest Instructors:

- E. PERRY McCULLAGH, M.D., The Cleveland Clinic.
 HENRY T. RICKETTS, M.D., University of Chicago.
 EDWARD J. RYAN, M.D., Emporia, Kans.

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extremely active part in committee work in the health and medical fields.

The Hill and Priest committee will handle most health legislation, with the exception of military, veteran and appropriation bills. For example, they will be in charge of reinsurance if it is reintroduced, as well as most health-medical bills originating in the Department of Health, Education and Welfare.

A number of other committee changes of importance to medical legislation are scheduled. Rep. Edith Nourse Rogers, of Massachusetts, a veteran of 29 years in the House, loses the chairmanship of the Veterans Affairs Committee. She is being succeeded by Rep. Olin Teague, of Texas, who was elected to Congress for the first time while he was completing his six-year Army duty in 1946.

The House Appropriations Committee chairmanship goes from Rep. John Taber, of New York, to Rep. Clarence Cannon, of Missouri; both have the reputation of being economy-minded. Of considerable significance in medical appropriations is the change in the chairmanship of the subcommittee that handles money for the Department of Health, Education and Welfare. The chairman for the last two years, Rep. Fred Busbey, of Illinois, carefully scrutinized all health appropriations, and effected many reductions. He was defeated for re-election. The prospective chairman of the subcommittee, Rep. John Fogarty, of Rhode Island, repeatedly has intervened in the committee and on the House floor to restore money that had been cut out by the subcommittee.

Chairman of the Armed Forces Committee in the Senate—where medical care for military dependents would be taken up—will be Senator Richard B. Russell, of Georgia, replacing Senator Leverett Saltonstall, of Massachusetts. On the House side, the Armed Forces chairmanship goes to the veteran Rep. Carl Vinson, also of Georgia. He replaces Rep. Dewey Short, of Missouri.

Any bills proposing reorganization of the executive departments will come before Chairman John L. McClellan, of Arkansas, in the Senate, and Rep. William L. Dawson, of Illinois, in the House. They are succeeding Senator Joseph R. McCarthy, of Wisconsin, and Rep. Clare E. Hoffman, of Michigan.

(EDITOR: This summary is, of course, predicated on the Democrats surviving a threatened recount of the close Senate vote in Oregon and going ahead with organization of both chambers.)

Plan to attend the Iowa State Medical Society's Annual Meeting, April 24-27, 1955, in Des Moines.

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CHICAGO MEDICAL SOCIETY

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PERSONALS

Dr. Ransom D. Bernard, formerly of Clarion, who retired from the position of general manager of the Iowa State Medical Society on January 1 of this year and has since been living in Ames, suffered a coronary occlusion, with urological complications, on November 14.

Dr. Leon J. Galinsky, medical director of the tuberculosis section of Broadlawns-Polk County Hospital, Des Moines, has been named to the advisory board of the American Trudeau Society.

Dr. Henry H. Gurau, of Des Moines, has announced that he is ceasing the practice of otolar-yngology and proposes, henceforth, to limit himself to ophthalmology.

Dr. Mark D. Ravreby, a 1948 graduate of the College of Medicine at SUI, has joined **Dr. John Parsons** in the practice of internal medicine in Des Moines. Dr. Ravreby was a resident at Boston City Hospital in 1949 and 1950, and the residency that he started immediately afterward, but only just completed, at the VA Hospital in Des Moines, was interrupted by two years of military service with the Marines in Japan.

Dr. Walter Block, of Cedar Rapids, helped to dedicate the new United Cerebral Palsy Center of Greater Cedar Rapids, on October 27, 1954.

Drs. Nelle S. Noble and **S. U. Wykoff**, of Des Moines, returned recently from a European tour, during which they attended a meeting of the International Medical Women's Association, at Gardone, Italy.

Dr. C. A. Nicoll, of Panora, underwent an appendectomy early in November.

After having been a patient at University Hospitals for about four weeks, **Dr. S. B. Zo'ler** underwent major surgery on November 8.

On November 1, **Dr. Lloyd E. Caaue**, a graduate of the College of Medicine at SUI, joined **Dr. Burns Byram** in practice at Marengo. Dr. Caaue

has served two years in the Navy since completing his internship at Tacoma, Washington.

The Air Force ordered **Dr. Gerald E. Larson**, of Elk Horn, to report to Gunther AFB, Alabama, on November 29. After three weeks there, he will go to the Overseas Medical Replacement Center, Camp Kilmer, N. J., for assignment.

The Commercial Club of the town of Newell, where he practices, presented a watch, inscribed "Mr. Newell, 1954," to **Dr. M. A. Armstrong**, on October 23.

The Boy Scouts of Marion County have made a memorial contribution to the Iowa Heart Association in the name of the late **Dr. C. S. Cornell**, of Knoxville, who was of considerable service to their organization some years ago. Such gifts are used in research work and in making discoveries available to physicians.

Dr. John Kuncaitis, a 1947 graduate of the medical school at Heidelberg University, has joined **Dr. W. V. Thornburg** in practice at Guthrie Center. He was in practice for two years before coming to this country, and just completed a year's internship at Iowa Lutheran Hospital, in Des Moines.

A graduate of the medical school at Howard University, Washington, D. C., **Dr. Douglas B. Scott**, has begun solo practice in Ottumwa. Dr. Scott served 24 months as a medical officer with the Air Force in Japan and Korea, and since his discharge has been a resident physician at Crile VA Hospital, in Cleveland.

Dr. Baldwin E. Lloyd, a graduate of the medical school at the University of Wisconsin who just completed a residency in surgery at the Denver General Hospital, has begun practice with the Surgical Associates, in Mason City.

Approximately 80 physicians attended a Fifth Councilor District gathering in Boone, on October 12. Speakers included **Drs. G. V. Caughlan**, Council Bluffs, president of the State Society; **Walter**

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D. Abbott, and **F. C. Coleman**, Des Moines; **Fred Sternagel**, West Des Moines; and **John Conner**, Nevada.

Beginning the third week in October, **Dr. Ross King**, of Clinton, spent a month taking postgraduate courses in chest diseases in Chicago.

Dr. Raymond G. Berggreen, a pediatrician on the staff of the Park Hotel in Mason City, has reported for military duty at Great Lakes Naval Training Station, Illinois. He enters service as a lieutenant, will spend two years in uniform, and expects to return to Mason City at the expiration of his tour.

The Iowa Division of the American Cancer Society elected **Dr. S. F. Singer**, Ottumwa radiologist, president at its eighth annual meeting in Des Moines early in October. **Dr. H. W. Morgan**, of Mason City, was reappointed medical director and chairman of the Board of Directors.

Dr. Donald V. Hirst, of Council Bluffs, and **Dr. H. Dabney Kerr**, head of the Department of Radiology at SUI, were each granted \$10,000 by the division, for research work. Dr. Kerr received the Division's award as "the Iowan who contributed most to cancer control in 1953."

Dr. D. J. Sullivan, who has practiced at Buffalo Center since July, moved to Sutherland on October 18, where he replaces the late **Dr. F. D. Kas**.

In De Witt, **Dr. M. S. Esters** opened an office for general practice early in October. He studied medicine in Berlin and Vienna before World War II, and practiced in Berlin for eight years and in West Germany (British Zone) for some time thereafter before coming to this country. He has just completed a year's internship at Iowa Lutheran Hospital, in Des Moines.

Dr. Glenn Schrader has opened an office in Melbourne.

Dr. Paul Ferguson, of Lake City, was stricken with non-bulbar poliomyelitis on October 6, and was taken to Iowa Lutheran Hospital in Des Moines. There were no recognized cases of the disease in the town at the time that he became ill, though there have been some since.

Dr. William D. Paul, professor of orthopedic surgery at SUI, addressed the Third Medical

Conference of the Muscular Dystrophy Association of America, in New York City on October 8, on "Clinical Aspects of Contractures in Muscular Dystrophy."

The State Board of Control has authorized the purchase of a \$1,150 soundbeam machine for Cherokee Mental Health Institute, and has granted **Dr. Willard C. Brinegar**, the superintendent there, permission to extend his investigation of its use as a substitute for the lobotomy technic. Dr. Brinegar recently observed sound operations to relieve the pain of brain cancer patients performed by Dr. Peter Lindstrom, in Pittsburgh, and he thinks that the beam can be used to interrupt nerve fibers in the brains of schizophrenics without the danger of inducing hemorrhage.

On October 20, a meeting of physicians in the Ninth Councilor District of the Iowa State Medical Society was held at Bloomfield. **Dr. Paul T. Cash**, of Des Moines, spoke on "Newer Trends in Psychiatry of Interest to the General Practitioner," and **Dr. S. B. Lindley**, chief of professional service at the Knoxville VA Hospital led the ensuing discussion. **Hon. Karl LeCompte**, the congressman, and **Dr. L. A. Coffin**, Farmington, president-elect of the State Society, also spoke.

Dr. Hunter H. Comly, assistant professor of psychiatry and pediatrics at SUI, reported to a state meeting on mental health, held at the University on October 22, that through a statewide investigation he has learned of 199 serious cases of emotional disturbance in children discovered by pediatricians, 26 found by district judges, and 151 found by visiting nurses. The State Board of Education, which governs SUI, reportedly is considering establishment of a 40-bed residential treatment center at Iowa City, for the purpose of diagnosis and treatment of such patients, for training physicians in the care of mental disorders, and for research. **Dr. Fritz Redl**, of the National Institutes of Health, Bethesda, Maryland, was principal guest speaker at the conference.

Dr. Robert M. Powell, resident physician at the Psychopathic Hospital at SUI, for the past three years, has been called to active duty by the Army and is stationed at Ft. Hood, Texas.

Dr. Robert D. Allbaugh, a graduate of the school of medicine at Washington University, St. Louis, who just completed a one-year residency in internal medicine at Minneapolis General Hospital, is

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Dr. Emory D. Warner, head of the Department of Pathology at SUI, led a seminar that was a principal feature of October 22-23 meeting of the State Association of Pathologists, at Iowa City.

Dr. J. W. Lawrence, who left Dubuque on October 1 after practicing there for 14 years, is serving temporarily as director of a three-county unit in Florida public health work. His headquarters are in Arcadia. Following the return of the permanent director of that unit, who is doing graduate work at Johns Hopkins University, Dr. Lawrence will be given the direction of a unit of his own.

Dr. Robert G. Wilson, who practiced for two years with **Dr. F. X. Tamisea** at Missouri Valley, and since then has been stationed at Clovis, New Mexico, with the Air Force, visited briefly with his father and friends at Griswold before reporting, early in November, at Camp Kilmer, New Jersey, from whence he will go to Etain, France, for duty.

On October 17, **Dr. and Mrs. R. L. Knipfer**, of Jesup, sailed from Morehead City, North Carolina, on a cruise sponsored by the Academy of General Practice of that state. Sightseeing at Caribbean ports was to be interspersed with scientific sessions on shipboard.

Dr. Robert Wilcox, a member of the student health service staff at SUI, spoke on "Problems in Counseling of College Students," and **Dr. Paul Seebohm**, associate professor of internal medicine at SUI, spoke on "Allergy in the College Age Group," at a sectional meeting of the American College Health Association in Decorah, on October 15. **Dr. Lois Bouldware**, also a member of the medical staff at the SUI student health service and president of the north central section of the organization, presided.

Dr. H. L. Ganzhorn, of Mapleton, has been promoted to the rank of lieutenant colonel in the Army's active reserve. He is one of the officers of the unit centered in Sioux City.

While on a hunting trip in South Dakota, **Dr. R. C. Eaton**, of Clarion, sustained an injury to one of his eyes.

Dr. John Heffron, of Anamosa, reported for

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duty with the Air Force, at Gunther Base, Montgomery, Alabama, in November.

Dr. F. L. Knowles, of Ft. Dodge, left during the last week in October for the Far East, where he was to lecture on his herniated disc operation under the sponsorship of the International College of Surgeons. He was to visit Tokyo, Hongkong, Bangkok and Manila, and was to speak in each of those cities.

PERCENTAGE BASIS SET FOR BILLING PATIENTS

On October 1, 1954, a group of more than 100 doctors practicing in San Joaquin County, California, agreed to a schedule of uniform fees that includes modifications, percentagewise, depending upon the economic status of the patient. It was the first of its kind in California, and perhaps anywhere.

For a routine office visit, it was agreed that the maximum charge will be \$5. For house calls between 7 a.m. and 7 p.m. the top charge is \$7.50, between 7 and 10 p.m., \$10, and between 10 p.m. and 7 a.m., \$12.50. Tonsillectomy for a patient under 12 years of age, with or without removal of adenoids, is to cost no more than \$60, and for a patient over 12 years old, \$75. Appendectomy for adults can cost no more than \$175; obstetrical delivery, with pre- and postnatal care, \$125.

Families with incomes of \$4,500 or more a year are to be billed for the full amounts. Those whose incomes are between \$3,500 and \$4,500 will be charged 75 per cent of the full prices. And those whose incomes are between \$2,500 and \$3,500 will pay 50 per cent.

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Arnold, K. E., Sioux City
(Port Hueneme, Calif.) Lt. (j.g.), U.S.N.R.
Berg, J. W., Ames.....
Berggreen, Raymond G., Mason City
(Great Lakes, Ill.)Lt., U.S.N.
Bogle, W. C., Marion
(Minneapolis, Minnesota)Lt., U.S.N.R.
Brennan, J. E., Des Moines
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Broman, J. A., Maquoketa
(Ft. Sill, Okla.) Capt., A.U.S.
Cline, H. L., Iowa City
(Riverside, Calif.)A.U.S.
Cloud, A. B., Guthrie Center
(San Antonio, Texas)A.U.S.
Daut, R. V., Davenport
(Westover Field, Massachusetts)Capt., U.S.A.F.
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(Pleasanton, Calif.)Capt., U.S.A.F.
- Dunseth, W. R., Kellogg
(APO San Francisco, Calif.)USAF
- Eckhardt, R. D., Iowa City
(Portsmouth, Virginia) Lt., U.S.N.R.
- Ehmke, Bruce C., Iowa City
(Hot Springs, Arkansas)1st Lt., A.U.S.
- Field, C. A., Cresco
(Manhattan, Kans.)Capt., A.U.S.
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- Kuehnle, G. R., Dubuque
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- Kurth, R. J., Waterloo
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- Montgomery, A. E., Jefferson
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(Great Lakes Naval Training Sta., Ill.)Lt., U.S.N.R.
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(Camp Kilmer, N. J.)A.U.S.
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(Great Lakes, Ill.)Lt., U.S.N.R.
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(Jamaica, N. Y.)U.S.N.R.
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(Bryan A.F.B., Texas) 1st Lt., U.S.A.F.
- Walston, J. H., Graettinger
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(Etain, France)Flight Surgeon
- Witte, H. J., Marathon
(San Francisco, Calif.)Lt. Col., A.U.S.
- Workman, R. D., Ruthven
(Omaha, Nebr.)U.S.N.
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THE JOURNAL

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INDEX

Volume XLIV • Numbers 1-12

1954

A

Abdominal Fascial Transplants (Editorial)	579
ACTH and Cortisone in Leukemia and Lymphoma, W. H. Griffith, M.D., and C. F. Gutch, M.D.	117
AMA Checks on "Strike It Rich" Applicants (Among advertisements in August issue)	
AMA Clinical Meeting	516
AMA Interim Session (Editorial)	25
Abdominal Musculature, Congenital Absence of, D. A. Culp, M.D., and R. H. Flocks, M.D.	155
Acromegaly, SUI Clinical Pathologic Conference	19
Addenda to Roster (Among advertisements in August issue)	
Adrenal Glands, Certain Lesions of, J. T. Priestley	407
Adrenal Pheochromocytoma, Bilateral, SUI Clinical Pathologic Conference	517
Advances in the Treatment of Severe Hypertensive Disease, A. C. Corcoran, M.D.	457
Alcock, Nathaniel Graham, M.D. (Editorial)	27
American Fracture Association	479
Amick, Lawrence D., M.D., Purpuric Anemia (Thrombotic Thrombocytopenic Purpura)	254
Anemia, Hemolytic, H. Margulies, M.D.	15
Annual Golf Tournament	159
Annual Meeting (Editorial)	172
Annual Meeting of the Iowa State Medical Society, Apr. 25-28, 1954, Program	95
Antibiotic Prophylaxis in Chronic Diseases	395
Antibiotic Sensitivity Tests (Editorial)	132
Appeal Made to Firms for Medical School Funds	273
April Is Cancer Month (Editorial)	175
Arkansas Studies Rural Health Needs	257
Arterial Homographs, Rodman E. Taber, M.D.	472
Arterial Hypertension, Physiopathology of, J. W. Culbertson, M.D.	160
Arthritis, Degenerative, Novocain Found Valuable in	159
Arthritis Research Fellowships (Among advertisements in October issue)	
Arthur D. Woods, M.D., Memorialis	440
Attorney General Leo A. Hoegh Issues an Official Opinion Upon Corporate Practice of Medicine by Hospitals and Division of Fees by Physicians	144
Attorney General Leo A. Hoegh Issues a Second Opinion Upon the Corporate Practice of Medicine by Hospitals and the Division of Fees by Physicians	581
Autonomic Nervous System: Clinical Application, Louis T. Palumbo, M.D.	6

B

Barach, Alvan L., M.D., The Management of Non-Tuberculous Lesions of the Chest	275
Baridon, David, Jr., M.D. (co-author), Myocardial Infarction as Treated at the Iowa Methodist Hospital: a Five and One-half Year Study	416
Barnes, Milford E., M.D., Dr. Bierring as an Educator ..	112
Basic Considerations in the Management of Renal Disease, Howard M. Odel, M.D.	374
Be a Therapeutic Skeptic	527
Bean, William B., M.D., Recent Advances in Internal Medicine: a Review of Five Years' Progress in the Department of Medicine of the SUI College of Medicine ..	497
Bernard, Ransom D., M.D. (Editorial)	76
Better Case Finding May Not Have Caused Rise in Lung-Cancer Mortality Figures	227
Bierring, W. L., M.D.: Dr. Bierring as Educator, Milford	

E. Barnes, M.D.	112
Block, Walter M., M.D., Should Mothers Be Permitted to Remain With Their Children in the Hospital?	215
Blodi, Frederick C., M.D., Failures of the Cataract Extractions and Their Pathologic Explanation	514
Blood Transfusions (Editorial)	78
Blue Cross-Blue Shield	
.....33, 82, 135, 178, 229, 263, 308, 398, 446, 486, 532, 588	
Blue Shield Cost Cut Proposed	440
Boden, Worthey C., M.D., Tracheotomy in Bulbar Poliomyelitis	384
Boric Talcs Safe for Babies	455
Braley, A. E., M.D. (co-author), Conjunctivitis, Its Etiologic Diagnosis and Treatment	427
British Patients Impatient	206
Bruner, Robert E., M.D., Cerebral Palsy and Brain Damage in Pediatric Practice	558
Buchman, D. M., M.D. (co-author), Prodromal Symptoms of Myocardial Infarction	412
Bureaucracy in Medicine (Editorial)	579
Burns, Thermal, SUI Clinical Pathologic Conference ..	122
Butcher, Harvey R., M.D. (co-author), Peripheral Vascular Diseases	463

C

Camp for Diabetic Children	146
Canada Reports "D-P" Doctor Problem (Editorial)	258
Cancer Chemotherapy (Among advertisements in the July issue)	
Cancer, Curability of Stomach, E. E. Mason, M.D.	150
Cancer, Lung, New Detection Program (Editorial)	129
Cancer Society Awards Nurse Scholarships	237
Cancer Society Grants Funds to SUI	495
Can This Be Your Trouble? (Editorial)	389
Carbohydrate Metabolism and Diabetic Acidosis, Current Concepts of, Paul From, M.D.	421
Carbon Dioxide, the Uses and Abuses of, S. C. Cullen, M.D.	162
Cardiac Symposium	31
Cataract Extractions, Failures of, and Their Pathologic Explanation, F. C. Blodi, M.D.	514
Cataract Extractions, Simplifying Technics and Avoiding Complications in, J. M. Donegan, M.D.	563
Caughlan, Gerald V., M.D., President-elect's Address ..	194
Cerebral Palsy and Brain Damage in Pediatric Practice, R. E. Bruner, M.D.	558
Certain Common Urological Problems in Children, Dwayne E. Howard, M.D.	281
Certain Lesions of the Adrenal Glands of Surgical Interest, James T. Priestley, M.D.	407
Changes in Communicable Disease Rules, Abraham Gelperin, M.D.	17
Chest Surgery Films Available	406
Chronic Diseases, Antibiotic Prophylaxis in	395
Chronic Empyema, SUI Clinical Pathologic Conference ..	295
Clinical Pathologic Conference, SUI College of Medicine	
.....19, 70, 122, 165, 218, 295, 517, 566	
Clinicopathologic Conference, Mercy Hospital, Des Moines	474
Cole, Warren H., M.D., Intestinal Obstruction	51
College of Medicine Issue (Editorial)	172
Committee on Rural Health Aids Physician Placement (Editorial)	301
Communicable Disease Rules, Changes in, A. Gelperin, M.D.	17
Conference on Children and Youth	436

Conference on Physical Medicine (Among advertisements in November issue)	
Congenital Absence of Abdominal Musculature, D. A. Culp, M.D., and R. H. Flocks, M.D.	155
Congress Gets Report on Nurse Problem	190
Conjunctivitis, Its Etiologic Diagnosis and Treatment, H. B. Ostler, M.D., and A. E. Braley, M.D.	427
Cooperatively Planned Hospital Care	491
Corcoran, A. C., M.D., Advances in the Treatment of Severe Hypertensive Disease	457
Correction	159, 392, 480
County Medical Society Officers	50, 274, 456
County Society Meetings	46, 93, 147, 189, 238, 272, 315, 406, 496, 542, 601
County Society P-R Manual	580
Course in Infectious Diseases	485
Culbertson, James W., M.D., Physiopathology of Arterial Hypertension	160
Cullen, Stuart C., M.D., Uses and Abuses of Carbon Dioxide	162
Culp, D. A., M.D. (co-author), Congenital Absence of Abdominal Musculature	155
Curability of Stomach Cancer, E. E. Mason, M.D.	150
Current Concepts and Treatment of Dysmenorrhea, P. K. Hughes, M.D.	546
Current Concepts of Carbohydrate Metabolism and Diabetic Acidosis, Paul From, M.D.	421
Current Treatment of Peptic Ulcer, J. B. Kirsner, M.D.	239
D	
Deafness in Children Investigated	284
Deaths	47, 94, 148, 190, 238, 272, 316, 406, 455, 496, 542, 602
Decontaminating Crushed Ice (Editorial)	482
Dermatologists Form State Organization (Among advertisements in November issue)	
Dermatology and Syphilology	537
Diabetes and Basal Metabolism	14
Diagnosis and Management of Gastrointestinal Hemorrhage, G. G. Spellman, M.D.	11
Diagnosis and Treatment of Masses and Tumors in the Neck, R. C. Hickey, M.D.	290
Diagnosis and Treatment of Pruritus Ani, J. W. Dulin, M.D.	387
Diagnosis of Pin Worms (Editorial)	225
Diddle, A. W., M.D. (co-author) Treatment of Dysfunctional Uterine Bleeding	543
Diet in Heart Disease (Among advertisements in the November issue)	
Dislocation of the Shoulder Joint and Infracture of the Humeral Head, R. W. Newman, M.D.	196
District Interprofessional Meetings (Editorial)	526
Dr. Biering as an Educator, Milford E. Barnes, M.D.	112
Doctor as Businessman (Editorial)	578
Doctor's Business	587
Dr. Caughlan Receives Merit Award	260
Dr. Chittum Is G.P. of the Year	260
Doctor-Citizen (Editorial)	173
Doctor Draft Is to Be Resumed	190
Dr. Ernest Shaw (Editorial)	482
Doctors in AA to Meet (Among advertisements in May issue)	
Doctors Shy Away From Cigarettes	455
Donegan, Justin M., M.D., Simplifying Technics and Avoiding Complications in Cataract Extractions	563
Donnelly, Madeline M., M.D., Iowa Maternal Mortality Study for 1952	244
Dormison—a Safe Drug, W. M. Hollander, M.D.	257
Double Christmas Seal This Year	584
Downing, W. L., M.D. (co-author), Fascial-Flap Repair of Inguinal Hernia	64
Drew, E. J., M.D., Management of Gas Bacillus Infections and Gas Gangrene	507
Drug Houses Aid Relief Effort	303
Duplication and Other Uncommon Gastric Lesions, J. B. Priestley, M.D.	207
Dysfunctional Uterine Bleeding, Treatment of, A. W. Diddle, M.D., and K. A. O'Connor, M.D.	543
Dysmenorrhea, Current Concepts and Treatment of, P. K. Hughes, M.D.	546
E	
Educational Fund Needs Additional Money (Editorial)	226
EENT Specialists' Course	600
Emphysema: Management of Non-Tuberculous Lesions of the Chest, A. L. Barach, M.D.	275
Emphysema, Chronic, SUI Clinical Pathologic Conference	295
Erratum in HUNDRED YEARS IN IOWA MEDICINE	128
Evans, Robert E., Ph.D. (co-author), Leptospira Pomona Infection in Man and Animals in Iowa	285
Excess Oxygen May Injure Infants	273
Exchange Scholarships in Plastic Surgery (Among advertisements in August issue)	
Experiences With Therapy for Arterial Hypertension at the Iowa City V-A Hospital, Walter M. Kirkendall, M.D.	460
F	
Factors in the Causation of Recognizable Poliomyelitis, F. H. Top, M.D.	379
Fail to Renew Medical Licenses	188
Failures of the Cataract Extractions and Their Pathologic	

Explanation, F. C. Blodi, M.D.	514
Facial Transplants, Abdominal (Editorial)	579
Fascial-Flap Repair of Inguinal Hernia, W. L. Downing, M.D., and H. L. Vander Stoep, M.D.	64
Federal Health Budget (Editorial)	574
Fifty Year Club Members	360
Films on Burn Therapy Available (Among the advertisements in the November issue)	
Flocks, R. H., M.D., Congenital Absence of Abdominal Musculature	155
Foreign Bodies, Gastric, Magnetic Extraction of, L. B. Williams, M.D.	213
Fractures (Among the Advertisements in the November issue)	
Fractures, Problems That Arise in the Use of the Intramedullary Fixation Principle in, J. K. Stack, M.D.	1
From, Paul, M.D., Current Concepts of Carbohydrate Metabolism and Diabetic Acidosis	421
Funds Given to SUI Medical School	443

G

G-I Bill Serves Good Uses (Among the advertisements in the August issue)	
G.P. Academy Makes Iowa Scholarship Award	227
Gamma Globulin Called Useless Against Polio	154
Gas Bacillus and Gas Gangrene, E. J. Drew, M.D.	507
Gastric Foreign Bodies, Magnetic Extraction of, L. B. Williams, M.D.	213
Gastric Lesions, Duplication and Other Uncommon, J. B. Priestley, M.D.	207
Gastroenterological Meeting	146
Gastrointestinal Hemorrhage, Diagnosis and Management of, G. G. Spellman, M.D.	11
Gelperin, Abraham, M.D., Changes in Communicable Disease Rules	17
General Manager's Page	34
General Practitioner (Editorial)	225
Germ Disease Mortality Deadlines	237
Glus, John Arnes, M.D., Postphlebotic Syndrome	469
Gray, Howard K., M.D., Management of Traumatic Lesions of the Thorax	108
Griffith, W. H., M.D. (co-author), ACTH and Cortisone in Leukemia and Lymphoma	117
Gutch, C. F., M.D. (co-author), ACTH and Cortisone in Leukemia and Lymphoma	117
Gynecologic Surgery, Selection of Patients for, J. R. Willson, M.D.	104

H

Happy New Year (Editorial)	25
Health Resources Handbook (Editorial)	174
Heart Disease and the Iowa Farmer (Editorial)	172
Heart Disease in Pregnancy, G. F. Keohen, M.D.	551
Heart Disease Institute	183
Heeren, Ralph H., M.D. (co-author), Leptospira Pomona Infection in Man and Animals in Iowa	285
Hemolytic Anemia, H. Margulies, M.D.	15
Hemorrhage, Gastrointestinal, Diagnosis and Management of, G. G. Spellman, M.D.	11
Hendricks, Stanley L., D.V.M. (co-author), Leptospira Pomona Infection in Man and Animals in Iowa	285
Hernia, Inguinal, Fascial-Flap Repair of, W. L. Downing, M.D., and H. L. Vander Stoep, M.D.	64
Hickey, Robert C., M.D., Diagnosis and Treatment of Masses and Tumors in the Neck	290
High Cost of Medical Education (Editorial)	131
Highlights of AMA House of Delegates Meeting (Editorial)	392
Highlights of AMA Interim Session (Editorial)	27
Highlights of AMA to Be Televised	243
Historical Manuscripts Requested	442
Hoegh, Attorney General Leo A., Issues an Official Opinion Upon Corporate Practice of Medicine by Hospitals and Division of Fees by Physicians	144
Hoegh, Leo A., Attorney General, Issues a Second Opinion Upon the Corporate Practice of Medicine by Hospitals and the Division of Fees by Physicians	581
Hollander, W. M., M.D., Dormison—a Safe Drug	257
Homemakers for Chronic Cases	148
Hospital Services—What They Are Not (Editorial)	76
Hospitals Seek to Exceed Their Function (Editorial)	481
Howard, Dwayne E., M.D., Certain Common Urological Problems in Children	281
Hughes, Parker K., M.D., Current Concepts and Treatment of Dysmenorrhea	546
HUNDRED YEARS IN IOWA MEDICINE, Erratum in	128
Hypertension, Arterial, Experience With Therapy for, at Iowa City V-A Hospitals, W. M. Kirkendall, M.D.	460
Hypertension, Arterial, Physiopathology of, J. W. Culbertson, M.D.	160
Hypertension Unaffected by Salt Reduction and Tobacco Abstinence	580
Hypertensive Disease, Advances in the Treatment of Severe, A. C. Corcoran, M.D.	457
Hypoplastic Anemia, Clinical, SUI Clinical Pathologic Conference	165

I

Immunization, Virus, Problems and Prospects of, J. S. Markham, Ph.D.	505
--	-----

Improved Soya Formula Marketed	190
Improved Hospital Exhibited (Among advertisements in June issue)	
International Academy of Proctology (Among advertisements in April issue)	
Intestinal Obstruction, Warren H. Cole, M.D.	51
Intra-Medullary Fixation Principle in Fractures, Problems That Arise in the Use of, J. K. Stack, M.D.	1
Iowa Academy of General Practice	
.....36, 84, 137, 180, 231, 265, 306, 397, 445, 484, 531, 586	
Iowa City V-A Does Artery Grafting	450
Iowa Industry Supports Medical Education (Editorial) ..	80
Iowa Lags Behind in AMEF Gifts	580
Iowa Maternity Mortality Study for 1952, Madeline M. Donnelly, M.D.	244
Iowa-Nebraska Medical Assembly	256
Iowa Nursing Home Association (Editorial)	439
Iowa State Medical Society, Officers and Committees, 1954-1955	349
Insurance Study Favors Medical Management of Ulcers ..	406
Insurance Utilization Is High (Among advertisements in October issue)	

J

Jamaica Medical Meeting	516
Journal Book Shelf	
.....38, 83, 136, 179, 230, 264, 305, 399, 447, 487, 533, 590	

K

Keohen, Gerald F., Heart Disease in Pregnancy	551
Kirkendall, Walter M., M.D., Experiences With Therapy for Arterial Hypertension at the Iowa City V-A Hospital ..	460
Kirsner, Joseph B., M.D., Current Treatment of Peptic Ulcer	239
Knight, E. C., M.D., Sacro-Iliac Lipoma Versus Pannicular Hernia	62

L

Laboratory Diagnosis in Obstetric Hemorrhage (Editorial) ..	302
Laboratory Study of Thyroid Function (Editorial)	525
Larimer, Robert N., M.D., President's Address	191
Laws Concerning Children and Youth	176
Leptospira Pomona Infection in Man and Animals in Iowa, R. H. Heeren, M.D., R. E. Evans, Ph.D., and S. L. Hendricks, D.V.M.	285
Lest We Forget (Editorial)	526
Let the Nurse Help (Editorial)	524
Letter to the Editor	175, 261, 441
Leukemia and Lymphoma, ACTH and Cortisone in, W. H. Griffith, M.D., and C. F. Gutch, M.D.	117
Living With Color (Editorial)	391
Lobotomy Program of the Clarinda Mental Health Institute, J. D. Stevens, M.D., and W. A. Muehlig, M.D.	252
Local Telecasts Resume Sept. 17	443

M

Magnetic Extraction of Gastric Foreign Bodies, L. B. Williams, M.D.	213
Malamud, William, M.D., Psychiatric Hospital Practice ..	56
Management of Gas Bacillus Infections and Gas Gangrene, E. J. Drew, M.D.	507
Management of Non-Tuberculous Lesions of the Chest, A. L. Barach, M.D.	275
Management of Traumatic Lesions of the Thorax, H. K. Gray, M.D.	108
Man Is Greater Than the Myth	579
Margulies, Harold, M.D., Hemolytic Anemia	15
Margulies, Harold, M.D. (co-author), Myocardial Infarction as Treated at the Iowa Methodist Hospital: a Five and One-half Year Study	416
Markham, Floyd S., Ph.D., Problems and Prospects in Virus Immunization	505
Mason, Edward E., M.D., Curability of Stomach Cancer ..	150
Masses and Tumors of the Neck, Diagnosis and Treatment of, R. C. Hickey, M.D.	290
Maternal Mortality Study for 1952, Iowa, Madeline Donnelly, M.D.	244
MEDICAL HISTORY OF POLK COUNTY	284
Medical History	591
Medical Interest Bills Before Congress (Among advertisements in February issue)	
Medical Library Needs More Space (Editorial)	390
Medical Reservists to Receive Credits for Attendance at AMA Section Meeting (Among advertisements in May issue)	
Medical Stenography (Editorial)	80
Membership Roster of the Iowa State Medical Society, 1954	351
Membership Roster of the Woman's Auxiliary to the Iowa State Medical Society	361
Meningitis, Tuberculous: SUI College of Medicine Clinical Mental Health Clinic Opens in Keokuk	37
Mental Health Column for the JOURNAL	504
Mental Health Institutes and Workshops (Editorial) ..	174
Pathologic Conference	566
Mental Illness	589
Mercy Hospital, Des Moines, Clinicopathologic Conference ..	474
Meritorious Service Recognized	261

Method for Equal County Representation in the Offices and Committees of the Iowa State Medical Society (Letter to the Editor)	175
Miller, H. L., M.D., Rooming-in	113
Minutes of Meetings of State Society Officers and Committees	32, 78, 133, 526, 580
Minutes of the 1954 Sessions of the House of Delegates ..	317
Model Nursing Home Ordinance Revised	494
Moniliasis Due to Candida Albicans, SUI Clinical Pathologic Conference	218
Month in Washington (Among advertisements in each issue of the JOURNAL)	
More Cases for V-A Hospitals	261
More "Coffee Breaks"?	406
Mortality in Heart Ailments Studied (Among advertisements in the May issue)	
Moyer, Carl A., M.D. (co-author), Peripheral Vascular Diseases	463
Muehlig, Wilbur A., M.D. (co-author), Lobotomy Program of the Clarinda Mental Health Institute	252
Myocardial Infarction as Treated at the Iowa Methodist Hospital: a Five and One-half Year Study, D. Baridon, Jr., M.D., and Harold Margulies, M.D.	416
Myocardial Infarction, Prodromal Symptoms of, H. J. Smith, M.D., and D. M. Buchman, M.D.	412

N

1954 Annual Meeting (Editorial)	130
1954 Annual Session (Editorial)	258
National Hearing Week (Editorial)	227
Nebraska Holds Third "Senior Medical Day"	206
Nebraska M.D.'s Fight Highway Death Toll	107
Neck, Masses and Tumors of the, Diagnosis and Management of, R. C. Hickey, M.D.	290
New Era (Editorial)	25
New Immunization Products (Editorial)	26
New Lung Cancer Detection Program (Editorial)	129
New Official Year Starts (Editorial)	224
New Postgraduate Education Medium	111
New Proposals for Federal Laws (Among advertisements in the April issue)	
Newman, Robert W., M.D., Dislocation of the Shoulder Joint and Infraction of the Humeral Head	196
Non-Tuberculous Lesions of the Chest, Management of, A. L. Barach, M.D.	225
Northwest Iowa Medical Society Is Reorganized	227
Novocain Found Valuable in Degenerative Arthritis ..	159
Now Is the Time (Editorial)	480
Nurse Recruitment Goal Is Set	537

O

Obligations (Editorial)	225
Ob. & Gynec. Boards	565
Obstetric Hemorrhage, Laboratory Diagnosis in (Editorial) ..	302
Obstetricians' Short Course (Among advertisements in November issue)	
Obstetrics and Gynecology Conference	26
O'Connor, K. A., M.D. (co-author) Treatment of Dysfunctional Uterine Bleeding	543
Odel, Howard M., M.D., Basic Considerations in the Management of Renal Disease	374
Office Nurses Criticize Bosses (Among advertisements in September issue)	
Omaha Meeting of A.C.S.	65
Omaha Mid-West Clinical Conference	491
Orientation Conference	436
Osteopaths Approve On-Campus Study	439
Ostler, H. B., M.D. (co-author), Conjunctivitis, Its Etiologic Diagnosis and Treatment	427
Our Interest in the AMA Meeting (Editorial)	391

P

Palumbo, Louis T., M.D., Autonomic Nervous System: Clinical Application	6
Pamphlets Tell Medicine's Story	253
Pediatrics for General Physicians	537
Peptic Ulcer, Current Treatment of, J. B. Kirsner, M.D.	239
Peptic Ulcer, Surgical Treatment of, O. H. Wangenstein, M.D.	365
Percentage Basis Set for Billing Patients. (Among advertisements in the December issue.)	
Peripheral Vascular Diseases, C. A. Moyer, M.D., and H. R. Butcher, M.D.	463
Peritonitis With Paralytic Ileus, Clinicopathologic Conference, Mercy Hospital, Des Moines	474
Personals (Among advertising pages in each issue of the JOURNAL)	
Pfuetze, Karl H., M.D., Role of the Private Physician in Tuberculosis Control	555
Pharmacists Thank State Society	188
Pheochromocytoma, Adrenal, Bilateral, SUI Clinical Pathologic Conference	517
Physician Distribution Very Good (Among advertisements in March issue)	
Physiopathology of Arterial Hypertension, J. W. Culbertson, M.D.	160
Pin Worms, Diagnosis of (Editorial)	225
Plastic Dressing Endorsed (Among advertisements in March issue)	





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